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The American Artisan
THE HARDWARE RECORD

Volume 42.—No. 26. CHICAGO, DECEMBER 28, 1901. $2.00 Per Year.

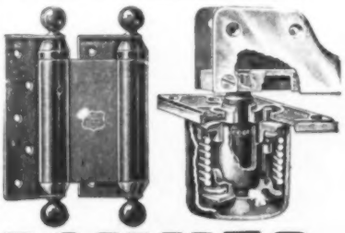
May have pouch feed and flush reservoir if desired.

You want a Range that will stand inspection and gain by comparison where others lose. We give such qualities in **Monarch Ranges.** You want something more than this advantage in merit and price—the opportunity to sell. Our plan renders assistance to you by searching for and finding customers, not waiting for them to appear. We multiply your profits without adding to your expenses. Entirely new and handsomely illustrated catalogue.

Malleable Iron Range & Mfg. Co.,
BEAVER DAM, WIS.

We make a full line of
Stove Bolts, Stove Rods,
Machine Screws,
Pointed Pins,
Threaded Wires,
Rivets,
Special Bolts,
Mica Bolts,
Cold Pressed Nuts.

Atlas Bolt & Screw Co.
CLEVELAND, O.



BOMMER SPRING HINGES.
BOMMER BROS. BROOKLYN, N.Y.

A UNIVERSAL REMEDY FOR
LEAKY ROOFS.

The valuable qualities of a good roofing cement are firm adhesiveness and elasticity. These qualities the

AMERICAN SEAL BUILDERS' AND ROOFERS'
ELASTIC OIL CEMENT

possesses. It will adhere firmly to Slate or Metal and will not crack or crumble. It is especially recommended for repairing leaks around chimneys, dormer windows, skylights, scuttles, firewalls and any place that requires fixing on a roof, either Slate, Tin or Shingle.

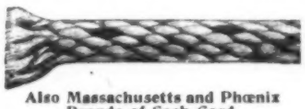
This Cement will answer to repair **a roof** when **Solder** can not be used

MANUFACTURED BY
Wm. Connors Paint Mfg. Co.
TROY, N. Y.
WESTERN AGENTS—J. L. PERKINS & CO.,
241 Lake Street, - - - CHICAGO, ILL.
STOCKHOFF SUPPLY CO., ST. LOUIS, MO.

Trying—to—do—business—without—advertising—is—like—winking—at—a—girl—in—the—dark;—you—know—what—you—are—doing—but—nobody—else—does.

BRADLEY SHELF BRACKETS.
Strong, Light and All Right.
ATLAS MFG. CO., New Haven, Ct.

SAMSON SPOT CORD



Also Massachusetts and Phœnix Brands of Sash Cord.
Samson Cordage Works, Boston, Mass.

Black Diamond Files and Rasps,
PERFECT—ALWAYS
Twelve Medals Awarded.
TRADE MARK
At International Expositions.
G. & H. BARNETT CO.,
Black Diamond File Works. PHILADELPHIA, PA.

Columbus Bolt Works,
Columbus, O.

Bolts,
Nuts,
Washers,
Turn Buckles,
Bridge and Roof Rods
and
Bolts
ALL KINDS OF CARRIAGE FORGINGS. CATALOGUE ON APPLICATION.

The "Globe" Ventilator
In Brass, Copper, Galvanized Iron and with Glass Tops for Skylight purposes.

For Perfectly Ventilating
Schools, Churches, Halls, Mills, Factories and Audience Rooms of Every Character.

Smoky Chimneys Cured.
"Globe" Ventilated Ridges. Send for Pamphlet.

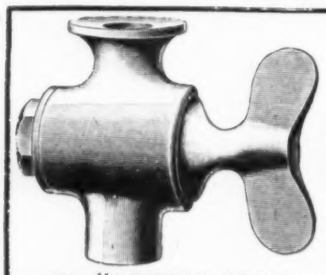
Manufactured by
Globe Ventilator Co., Troy, N.Y.

BOILERS AND RADIATORS

A Postal Card from you will bring valuable, complete information in regard to the best, most comprehensive, strictly modern line of these goods.

WRITE US TODAY.
New York, Boston, Philadelphia, St. Louis, Buffalo, Minneapolis, Denver, Detroit, London.

AMERICAN RADIATOR COMPANY
Lake and Dearborn Sts., CHICAGO.

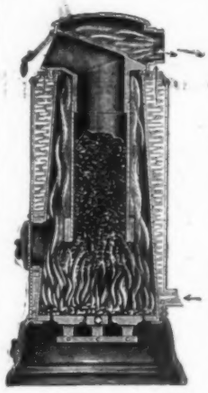


The "OMECA," 2-3 Size.
To attach to bottom of can.

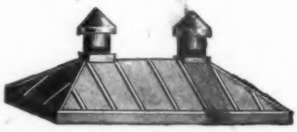
BEER,
MILK CAN,
OIL CAN,
CREAM SEPARATOR
FAUCETS.
Various Sizes and Styles.
MANUFACTURED BY
CLARK NOVELTY CO.,
ROCHESTER, N. Y.
Also Mfrs. of The CLARK Kerosene Oil System for Heating Soldering Coppers.

M. O. Miller, Cambria, Wis., writes: "Please discontinue my adv. in the want column of The American Artisan or I shall have to engage a stenographer."

"TABASCO" Water Heaters.



ALL STEEL, SELF-FEED, SHAKING GRATE.
FOR Small Residences, Greenhouses, Flats, Hotels, Baptisteries, Bath Houses, any place a supply of hot water is needed.
SEND FOR CATALOGUE.
Kewanee Boiler Compa'y
Kewanee, Ill.
CHICAGO STORE: 167-169 E. Lake St., CHICAGO.



"The Illinois"
METALLIC SKYLIGHTS
Are known in every State. Have stood the test for years. Are made in 10 styles and 500 sizes. Complete Skylight, Cornice and Finial Catalogue mailed free.
J. H. JONES, Mfr.,
Lock Box 33. STREATOR, ILL.

COMMERCIAL LAW. COLLECTIONS.

THE AMERICAN ARTISAN AGENCY,

LAW AND COLLECTION DEPARTMENT OF
THE AMERICAN ARTISAN,
69 Dearborn Street, CHICAGO.

UNDER MANAGEMENT AND PERSONAL SUPERVISION OF
RALPH F. STERN, Atty.

Today is the time to attend to your past-due accounts. Let us help you.

We have a thoroughly organized Collection Department. Collections made anywhere.

Full reports furnished and remittance made the same day collection is made. Careful attention guaranteed in each case.

Rates reasonable, and no charge where no collection is made.

No membership fee.

Reliable attorneys in every city and town. Claims prosecuted without litigation when ever possible. Long distance telephone in office.

PHONE EXPRESS 677.
CHICAGO REFERENCES:—
Chicago Engineer Supply Co.
Babcock & Wilcox Co.
Robert Stevenson & Co.
Regan Printing House.
and any National Bank in Chicago.

THE AMERICAN ARTISAN AGENCY,
RALPH F. STERN, Attorney,
69 Dearborn St., CHICAGO

QUICK MEAL

Gasoline Stoves

THE STOVE THAT LEADS

"QUICK MEAL" Gasoline Stoves are used in all parts of the World. Their **Name** is a synonym of **Perfection.** Their appearance attracts attention. The simplicity of their parts and the workmanship-like manner in which they are made makes it easy for the operator to understand them, easy to regulate, easy to keep clean, and easy to repair.

The dealer who sells the "Quick Meal" makes friends, gives his customers a Gasoline Stove they can't help understand how to handle and one that will bake and cook as well as a range or cook stove. Now is the time to secure the agency for the coming season.

RINGEN STOVE Co. SAINT LOUIS

RELIABLE

Vapor Stoves and Ranges

have been greatly improved for 1902, and in the future, as in the past, they will be beyond the reach of all competition. Dealers who handle the RELIABLE line invariably control the vapor stove business of their city, as anyone examining these stoves can easily see that they are the best on the market. They never disappoint the user. Each stove sold will sell another! Testimonials of dealers who have handled them bear witness to their profit-making qualities.

Dealers should write us for a copy of our 1902 Vapor Stove Catalogue. Free for the asking.

The Schneider & Trenkamp Co.

Cleveland Chicago San Francisco

National Stoves AND Ranges

Complete Trade Mark Line at Popular Prices.

Superiority in every particular is what has established

National Stoves AND Ranges

Over 80,000 Users Attest the Merits of

National Stoves AND Ranges

Write for our Complete Catalogue, No. 15, showing the best and most up-to-date line of goods on the market. We are now in a position to fill orders promptly.

Excelsior Stove & Mfg. Co.

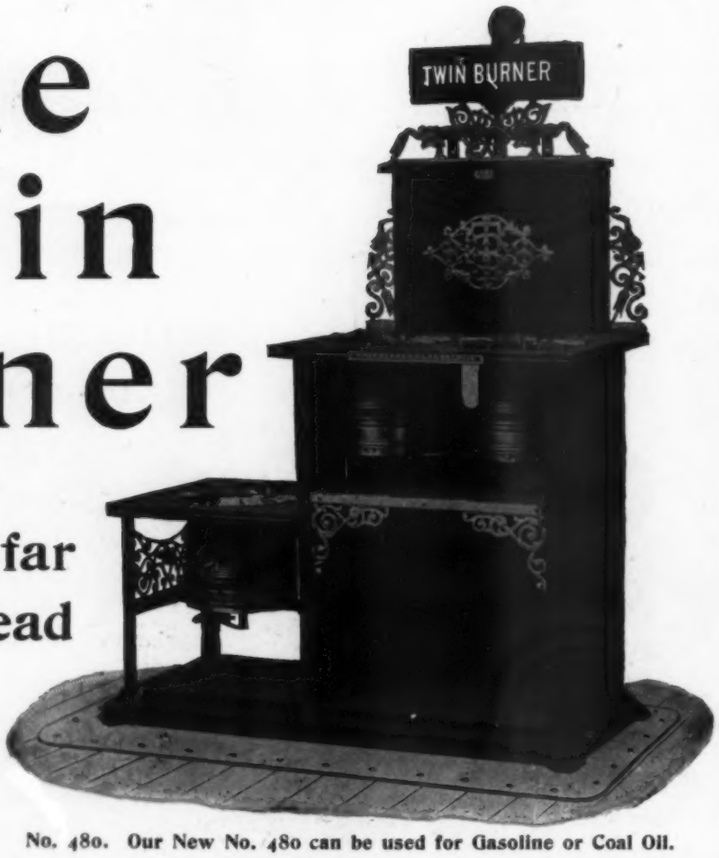
Largest Stove Makers in the World.

QUINCY, Ill., U. S. A.

1902

The Twin Burner

Line for the New Year is far and away ahead of anything yet shown in



No. 480. Our New No. 480 can be used for Gasoline or Coal Oil.

Gasoline and Oil Stoves.

GET OUR CATALOGUE. SENT FREE.

Twin Burner Vapor Stove Co.,

206-210 South Seventeenth St., - - ST. LOUIS, MO.

The "Standard" Wickless Blue Flame Oil Stove

For Coal Oil or Gasoline.

TIME TRIED: It has been in successful use for four seasons and has proven an unqualified success.

It lights quickly, the flame is easily controlled. No joints to leak, is absolutely safe. It is the original and most successful Wickless Oil Stove. For simplicity, safety and perfect operation, is unexcelled.

The following well known jobbers have sold the "Standard" Wickless from its beginning. They recommend it. That guarantees it.

EASTERN JOBBERS.

F. M. Borden & Bro., Philadelphia, Pa.
Eugene Munsell & Co., New York, N. Y.
The S. M. Howes Co., Boston, Mass.

SOUTHERN JOBBERS.

W. B. Belknap & Co., Louisville, Ky.

WESTERN JOBBERS.

Cook & Van Evera Co., Chicago, Ill.
Morley Bros., Saginaw, Mich.
Townley Stove Co., Terre Haute, Ind.
F. Tiemann Stove & Hdwe. Co., St. Louis, Mo.
Townley Metal Co., Kansas City, Mo.
A. C. Raymer, Omaha, Neb.
M. P. Borden Stove Co., Denver, Colo.

THE NORTHWEST.

Farwell, Ozmun, Kirk & Co., St. Paul, Minn.

PACIFIC COAST STATES.

Holbrook, Merrill & Stetson, San Francisco, Cal.

DOMINION OF CANADA.

The Thos. Davidson, Mfg. Co., Montreal, Quebec

The Standard Lighting Co.,

CLEVELAND, OHIO.

GOLD COIN
LIBERTY
STOVES & RANGES

We wish our many friends in the retail stove trade

A Happy New Year

and hope that 1902 may prove even more prosperous to them than the year just past has been.

Chicago Stove Works

Blue Island Ave. and 22nd St., Chicago

The Sunshine Stove Shop

takes this occasion to thank its many friends in the trade for the generous patronage they have given the Sunshine Stoves and Ranges the past year, and to wish the entire stove trade

A Happy and Prosperous New Year.

We shall continue to do all in our power to further our customers' interests and provide them with the best goods we know how to make.

The Reading Stove Works,
Orr, Painter & Co.
Reading, Pa.

Ross & Kontny, Western Managers,
153=159 S. Jefferson St.,
Chicago.

To The Trade

We wish to cordially thank the trade for their kind favors in the past, and to assure them of our deep appreciation of their generous patronage the past year.

It is our constant endeavor to manufacture an up-to-date line of goods, embodying the latest and best ideas in furnace, steam and hot water construction.

We will do our utmost to be worthy of a continuance of your patronage in the forthcoming year.

Wishing you the compliments of the season, we are

Very sincerely yours,

The Boynton Furnace Co.

147-149 Lake St., CHICAGO.

207-209 Water St., NEW YORK.

Compliments of the Season

A Happy New Year To the Trade.

We are deeply indebted to the trade for the very generous support they have accorded Utica heaters and Superior furnaces the past year. We are glad that our friends in the trade have done so well during 1901, and sincerely hope they will do much better in 1902.

A Prosperous New Year To the Trade.

Utica Heater Co.

UTICA, N. Y.

THE BUSIEST MAKERS OF STOVES & RANGES IN THE WORLD

Are very thankful to the retail Stove trade of America for the appreciation of Model stoves and ranges they have shown the past year, and take this occasion to extend the compliments of the season to the Trade and to express their hope that 1902 will be the best year the retail stove trade ever had.

Portsmouth Stove & Range Co.
Portsmouth, O.

Portsmouth Stove & Range Co.
Portsmouth, O.

The Kelsey Furnace Co.

Syracuse, N. Y.

EXTENDS

A Cordial New Year's Greeting

TO

ITS MANY

Friends in the Retail Furnace Trade.

LANDON P. SMITH, PREST.

JNO. F. HEMENWAY, SECY. & TREAS.

Smith & Hemenway Co.

MANUFACTURERS, IMPORTERS & EXPORTERS

S. H. TRADE MARK

OUR BIG FOUR LINE.
NIPPERS & PLYERS. WRENCHES.
GLASS CUTTERS. NAIL PULLERS.

Cutlery & Hardware Specialties

GENUINE "GIANT" NAIL PULLER.

CABLE ADDRESS "ANVIL, NEW YORK" LIEBERS CODE
TELEPHONE, FRANKLIN, 2770.

296 BROADWAY,
(BETWEEN READE & DUANE STS.)

NEW YORK OFFICE OF
UTICA DROP FORGE & TOOL CO.

New York, Dec. 16th, 1901.

Mr. Daniel Stern,

c/o American Artisan,

Chicago, Ill.

Dear Sir:-

My associates and myself have decided to drop out quite a number of the thirty odd papers in which we advertise, and spend our money through other advertising mediums in preference to trade journal I am pleased to announce, however, that the results obtained from your American Artisan for the past year have been so gratifying, that we have decided to continue with you. I herewith enclose two full page advertisements, one for each issue in January and February.

BUSINESS FOR 1901 Business for 1901 has been eminently satisfactory. We have had a phenomenal increase in our business over the year 1900. Our associates, the Utica Drop Forge & Tool Co., manufacturers of nippers and plyers, and Thomson Bros. & Co., manufacturers of Seavey's Mitre Box, will join us in advertising mediums for 1902.

Wishing you the compliments of the season, we beg to remain,

Very truly yours,

SMITH & HEMENWAY CO.,

DICTATED BY

L. P. Smith, Prest.,

M. M. Stenograp

The Shoe Dealer

who kept only 3 or 4 sizes of shoes would be considered crazy, and yet there are retail furnace men who handle a line of furnaces that is not large enough to meet the furnace requirements of their city. These dealers should take an agency for the **Floral City** warm air and combination heaters, made in 15 different types, for all classes of work and all classes of fuel.

Monroe Foundry & Furnace Co.,

Monroe, Mich.

BUY

CLOSED.

The Triumph Adjustable Stove Pipes

AND SAVE TIME, SPACE AND MONEY.

NESTS 25 L.

The Triumph Adjustable Stove Pipes are easy to put up, and when up need no wire to hold them, as they are solid and tight.

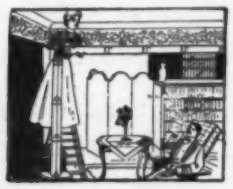
The Triumph Adjustables are here to stay,
And their demand is gaining day by day.
Their venture has gained great renown
In city, country and in town.

Write for Prices, etc.

PUTTING UP THE COMMON PIPE.

The Triumph Adjustable Stove Pipe Mfg. Co.,

JOLIET, ILL.



PUTTING UP THE TRIUMPH ADJUSTABLE.

Royal Heaters.

MANUFACTURED BY THE

HART & CROUSE CO.

UTICA, N.Y.

ALL THE LEADING LINES OF

STEAM, HOT WATER & HOT AIR,

FOR HEATING ALL CLASSES OF BUILDING.

235 WATER ST. N.Y. COLUMBUS, O. BRANCHES. 79 LAKE ST. CHICAGO. ST. LOUIS.

Ohio and U.S.

Wrought Steel Ranges

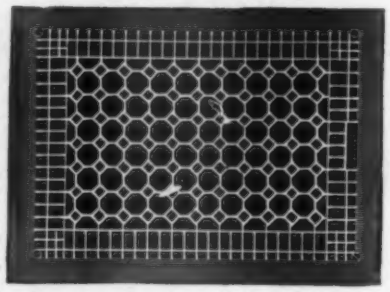
We are pioneers in steel range business; old in experience yet adopt modern up-to-date methods. Write for our catalog.

Tinnerman Steel Range Co.,

CLEVELAND, O.

Henry & Scheible Co.

SUCCESSORS TO T. R. HENRY.
10 Long St. CLEVELAND, O.



ALL SIZES—ALL STYLES OF FINISH. PROMPT SHIPMENTS

Quality and finish unexcelled.

SEND FOR CATALOGUE

Advertising is the root of all money.

STAR STOVES AND RANGES
ENTERPRISE STOVE CO. VINCENNES, IND.
GUARANTEED

CATALOGUE SHOWING

Gas Ranges
Steel Ranges
Cast Ranges
Steel Cooks
Cast Cooks
Cast and
Steel Heaters
Hot Plates

WILL BE FURNISHED FOR THE ASKING BY

Enterprise Stove Co.
VINCENNES, IND.

JEFFRIES is the **champion** prize fighter.

Lasker is the **champion** chess player.

Fournier is the **champion** automobilist.

The Champion steel range is the **champion** steel range. It has the only double flue Hot Blast construction and is guaranteed to give satisfaction with any kind of fuel. They are finished in Japan and polished steel or Russia iron.

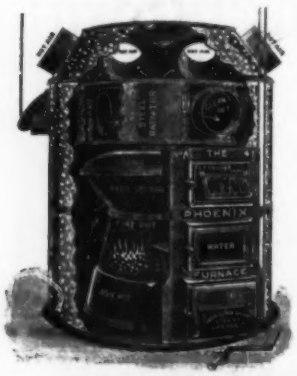
Champion Steel Range Co.
CLEVELAND, OHIO.

We are represented by the following houses: Lee-Glass-Andreesen Hdw. Co., Omaha, Neb.; James Graham & Son, San Francisco, Cal.; Michigan Distributing Co., Lansing, Mich.; J. M. Litchfield, New York, N. Y.; Kettlesen & Degetan, Chihuahua, Mex.; Moore-Handley Hdw. Co., Birmingham, Ala.; Richards & Conover Hardware Co., Kansas City; Chicago Stove and Range Co., Chicago, Ill.; Jacob Ketterer, Chicago, Ill.; Corbett, Failing & Robertson, Portland, Ore.; Palmer Hdw. Co., Savannah, Ga.

Sun Stove Company
MANUFACTURERS OF
The Celebrated Sun Stoves,
Gasoline, Oil and Gas Stoves,
Air Tight and Hot Blast Heaters,
Gasoline Lamps, Torches and Ovens.
1305 to 1319 Bellevue Ave.,
DETROIT, MICH.

R. B. WARD, Belleville, Kas., writes:

"Please take my advertisement, 'Tinner Wanted,' out of THE AMERICAN ARTISAN. Your paper certainly reaches the craft. I cannot find time to answer all the applications coming in."



You Make

no mistake when you secure an agency for the Phœnix furnace. It is simple in construction and moderate in price. The fire pot is scientifically constructed and the grate is Palmer's triangular revolving hollow bar grate. Write us for prices. They will interest you.

Phœnix Iron Works

UTICA, N. Y.

The Torrid Zone Furnace

will make you more money than many others.

First, because it gives your customer satisfaction.

Second, it is easily set up and cased.

Third, it has points of merit that others do not have to point out to the customer.

Fouth, the price is right. We give you your choice between a castiron and brick lining at the same price.

Write for catalogue and prices on Hot Air Furnaces and Combination Heaters.

Lennox Manufacturing Company,

Cor. 9th Ave. & Frederick St., MARSHALLTOWN, IOWA.

The Everlasting Chimney Cap

is the best in the world. The trade in all sections are handling it. Why don't you?

It is a money maker.

The Schreiber & Conchar Mfg. Co. DUBUQUE, IA.

We ship our Register orders promptly.

75 Sizes.

INDEPENDENT REGISTER CO.

158 Champlain Street,

CLEVELAND, O.

Established 1874.

The largest and most reliable **Foundry Supply House** in the world.

THE

S. Obermayer Co.,

CINCINNATI, OHIO.
CHICAGO, ILL.

manufacturers

"Everything You Need in Your Foundry."

Importers and refiners

PLUMBAGO GRAPHITE.

Catalog Sent on Application.

FREE SITES

and Other Inducements to Reliable Manufacturing Concerns

The Indiana Illinois & Iowa Railroad Co.'s

(THE TIME SAVER)

Rails reach from the **Mississippi River to Lake Michigan.**

Intersecting every Railroad in and out of Chicago.

On its line are numerous large and successful manufacturing enterprises.

As well as many **unequaled locations** for manufacturing and industrial concerns.

Live towns and progressive people.

Manufacturing plants along the line of THE INDIANA, ILLINOIS & IOWA RAILROAD have the same advantages in shipping facilities and

FREIGHT RATES

to all points North, South, East and West as though located in Chicago, or if the tracks of all and every Railroad entered directly into their warehouses.

NO SWITCHING CHARGES.
NO EXPENSIVE TEAMING.
NO DELAYS.
Quick Satisfactory Service.

The Indiana, Illinois & Iowa Railroad realizes that saving in Freight Rates and "No Delays" for the manufacturer and shipper mean **mutual interest.**

IF you are not well located.
IF you want to better yourself.
IF you want a more favorable location.
IF you want the very best freight rates.
IF you want cheap fuel.
IF you want to avoid labor troubles.
IF you want your employes to have individual homes and contentedness.
IF you want to combine nearness to your markets.
IF you want free land for your plant.
IN fact if you want any kind of industrial or freight rate information call or address

INDIANA, ILLINOIS & IOWA RAILROAD

THE ROOKERY CHICAGO, ILL., U.S.A

E. W. Lowell

of the Lowell Hardware Co.
Janesville, Wis.
Writes:

"We can't do business without THE AMERICAN ARTISAN."

JEWEL STOVES AND RANGES..

JEWEL STOVES AND RANGES
LARGEST STOVE PLANT IN THE WORLD

A Complete, Well Advertised Line;
Low Prices and Good Workmanship.

Please Write for Catalogue.

DETROIT STOVE WORKS.

Detroit - Chicago.

2000

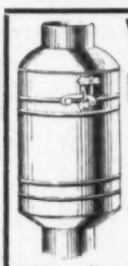
dealers throughout the United States have made good profits by handling the

Willard Steel Ranges.

Why should not you? This steel range is sold at a price that places it within reach of everyone. It is unquestionably the best seller on the market.

Wm. G. Willard, Mfr.,

619-621 N. Fourth St. ST. LOUIS. MO.



We Protect Dealers

Who handle Burton's Fuel Economizer.

A trial order will convince you.

W. J. Burton & Co.
Manufacturers,
164-166 W. Larned St., Detroit.

F. W. Wohlenberg
Ida Grove, Ia.

Writes:

"I have secured a position through your paper and I think it pays any man to advertise who is looking for work."

E. D. Strong
Dryden, Mich.
writes:

At present I am not in the Hardware business, but feel that I cannot afford to be without THE AMERICAN ARTISAN. It is a most valuable paper.

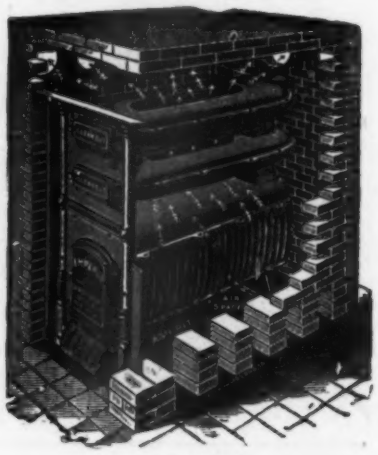
Double Radiator, All Cast Furnace.

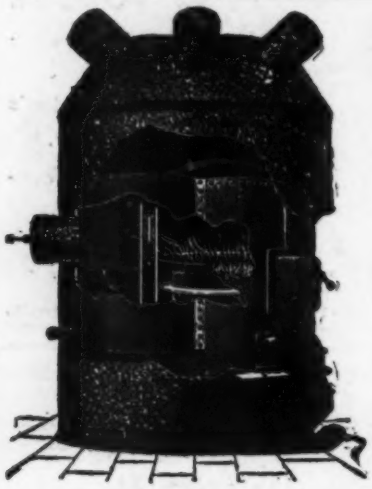
UP-TO-DATE
DEALERS HANDLE
MUELLER
FURNACES AND BOILERS
BECAUSE THEY ARE
THE BEST.
EVERYTHING IN THE HEATING LINE
Get Our Special Register Offer

For Wood or Coal.

191 Reed St. **L. J. MUELLER FURNACE CO.** Milwaukee, Wis.

Emperor Furnaces
For Wood
Simple. Safe. Durable.
The Best and Cheapest
Line of Wood Furnaces.
Furnished for Either Brick or Galvanized Iron Casing. Send for Catalogue.
Bergstrom Bros Co.
Neenah, Wis.





Weir Furnace.

Weir ALL STEEL GAS AND SOOT CONSUMING Furnace.
The Heaviest Steel Furnace Made.
Absolutely gas and dust tight.
A great heat producer, but a fuel saver.
MADE IN TWELVE SIZES.
"The Handy Furnace Pipe"
The saving of labor in putting it up really makes it the cheapest hot air pipe on the market.
Manufactured by
Meyer Furnace Co.
Send for Catalogue. PEORIA, ILL.

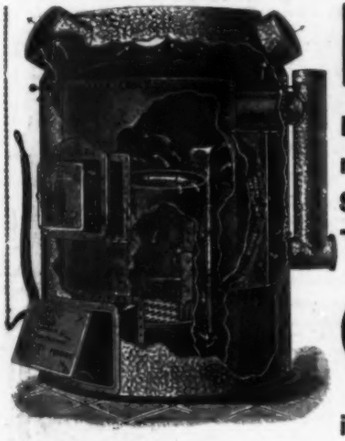
Is Absolutely Safe.

Handy Pipe.

BRAND STOVE CO.

We make largest line of cooking and heating apparatus, cast cooks, cast ranges, steel cooks, steel ranges, hotel outfits, heating stoves, furnaces, hot water and steam heaters. Send for catalogs.
MILWAUKEE, WIS.

THAT PAPER IS THE CHEAPEST WHICH BRINGS THE BEST RESULTS IN PROPORTION TO ITS RATE, NO MATTER WHAT THAT RATE MAY BE.



Did it Ever Occur to You,

Mr. Furnace Dealer, that LARGE HEATING SURFACE means LARGE CAPACITY, PLENTY OF WARM AIR, A SMALL COAL BILL, and an ENTHUSIASTIC CUSTOMER? Every inch of the

Quaker Furnace

is Heating Surface. More than double the surface of the ordinary furnace. Send Postal and we will tell you all about it.

Wireton Heating Co.

MAIN OFFICE, BLUE ISLAND, ILLS. CHICAGO OFFICE, 40 DEARBORN ST.

Gilt Edge Furnaces and Combination Heaters

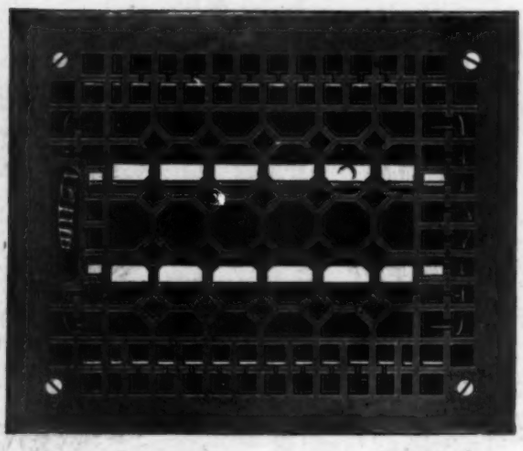
Registers and Tin and Galvanized Iron Furnace Fittings Manufactured by

R. J. SCHWAB & SONS CO., - - Milwaukee, Wis.

OUR LINE OF

REGISTERS

WILL INTEREST THE TRADE.



Write Us For Prices. They Will Certainly Interest You.

The Fanner Mfg. Co.

CLEVELAND, O.

Registers and Ventilators.

A Full Line, Unique Designs.

Quality and finish unexcelled. All styles of finish, from Japanned to Gold Plated.

Send for Catalogue:

The Philadelphia Hardware and Malleable Iron Works

Philadelphia, Pa.

L. L. Dana, Deponset, Ill., Writes:

"Please take my advertisement out of your paper for set of tinner's tools.
Have had plenty of answers and have secured a set."

ROUND OAK—STANDARD of AMERICA

See the Round Oak Traveler

Don't make up your mind in a hurry about next year's stoves, ranges and furnaces. See the Round Oak Traveler first. The Round Oak Steel Range and the Round Oak Standard Cast Range are pronounced by one of Iowa's foremost merchants to be "the best goods of their kind that ever were placed on a salesroom floor." They are worth finding out about.

Round Oak Traveler

ESTATE OF

P. D. BECKWITH, Dowagiac, Mich.

MAKERS OF GOOD GOODS ONLY

ESTABLISHED 1880.

THE AMERICAN ARTISAN & HARDWARE RECORD

Representative of the Stove, Tin, Hardware, Heating and Ventilating Interests.

PUBLISHED EVERY SATURDAY.

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CHICAGO, DEC. 28 1901.

HAPPY NEW YEAR.

SUGAR imports into the United States in the calendar year 1901 will exceed those of any preceding year by about 250,000,000 pounds, and the cost will be greater than any preceding year except 1893, when prices were unusually high.

THE publishers of the Farm Implement News, Chicago, are to be congratulated on the 160-page Christmas number they recently got out. This is printed in colors, and both reading matter and advertising reflect credit on this enterprising journal.

WHILE the American employer and employe are getting nearer together, the British industrial world seems to show wider discord. The latest manifestation of this is shown in the riots at Northampton, Eng., Dec. 13 among shoe operatives against the use of new shoe lasting machines.

THIS is an age of wonders, and the recent experiments of Marconi in transmitting signals 1,700 miles across the ocean without a cable has excited but passing comment. If this new system stands the test, the rate of cabling will probably ultimately be reduced to a cent a word or less.

THE English seem to be more successful in running international expositions than either the French or Americans. While the Paris Exposition and the Pan-American Expositions each closed with a deficit, the Glasgow Exposition, of 1901, had a surplus approximating $500,000 to the good.

TINNERS, roofers, cornicemen and other building trades mechanics will be interested in a decision recently made by Judge Adams, in the United States District Court for the southern district of New York. It is to the effect that a mechanic's lien, the notice of which is filed after the adjudication of a debtor in bankruptcy, is not avoided by the bankruptcy, and that such mechanic's lien takes preference to the claim of the trustee in bankruptcy.

A RECENT article in Cassier's Magazine throws some interesting data on the effect of machinery on wages in the iron and steel trades. Twenty years ago rod rollers received $2.12 per ton of rods made, out of which they paid for no help whatever. Today it has become almost common practice to make 200 tons of wire rods in a single turn. If rod rollers received their pay on the same basis today that they did a score of years ago they would receive the modest compensation of $424 per day.

THE other day a solicitor for a trade union alliance souvenir visited a certain city to secure advertisements for same, but received an icy reception, as a few hours before his arrival a warning letter had been issued by one of the moguls in the very association he was presumed to represent, warning advertisers not to patronize this "souvenir."

This is no new story, as every once in a while some organization finds itself the dupe of some advertising schemer, whose heads I win, tails you lose tactics are only apparent after the souvenir is out and the startled officials of the association find that their names have been used in an entirely unauthorized manner and that the profits of which they were to have some liberal percentage have mysteriously disappeared.

The advertising fakirs who get up souvenirs for associations of all kinds, programs for picnics, histories of fire departments, and similar works, follow the rule of working a given territory but once and milking it good and proper while they are at it.

The machinery manufacturer who has been beautifully taken in by the smooth soliciton for a machinists' "souvenir," may get very angry when he finds out that he is only getting 500 instead of 25,000 circulation; that his advertisement is a sight, typographically, and is not free from grave proof-reading errors; that the paper used is very inferior to the super-calendered stock shown in the solicitor's prospectus, and that the officers of the association he intended to benefit are very raw when the subject "souvenir" is mentioned, as only a scanty fraction of the funds made therefrom have reached them.

But what does the rage of the machinery man matter to the advertising fakir. He has "done" the machinery trade for all there is in it and is now exercising his arts in behalf of the "Semi-Centennial History of the Farmville Fire Department" and is gathering in the present shekels and paving the way for the future abuse of the makers of fire bells, hooks and ladders, etc.

Like the Irishman's flea, you cannot lay your hands on him when you want him.

These fakirs bear the same relation to legitimate advertising solicitors that the fly-by-night merchant who rents a store and conducts an "auction sale" or a "bankrupt sale" bears to the legitimate retail dealer.

RANDOM SKETCHES.

BY SIDNEY ARNOLD.

THE Chicago Tribune tells a story of a small district messenger boy asking a policeman where the "Take a Nickel" club hung out; the organization he desired being the "Technical" Club, the present home of the Chicago Hardware & Manufacturers' Club.

* * *

GENERALIZATION is a fault of the age. Take the subject of investment and people are apt to talk glibly about the wisdom or non-wisdom of investing in industrials or even of dabbling in industrial stocks. Now stock in some of the consolidations of capital that have been formed the past few years is not such a bad thing to have. There are money-making combinations and money-losing combinations, just as there are some men who can make business pay and others who can not. I picked up a copy of the United States Investor of December 14, 1901, recently, and found this reply to a correspondent who asked concerning the prospects of the International Silver Company:

"The balance sheet of this company is somewhat hard to compare with the year 1900, and leaves a good deal to be guessed. Taking the loss in stock on hand, $675,514, and subtracting from this the gain, in cash, $43,281, and in accounts receivable, $273,234, we have a net decrease in these items of $344,552. Turning to the liabilities, we find that accounts payable decreased $14,447, so that liquid assets fell off $344,552. Against the decrease in other investments $95,030, you speak of there is an increase in bonds in treasury of $32,000, which partially offsets this item. Plant investment increased $141,818, while, on the other hand, the outstanding stock increased $44,700. Surplus decreased $310,635, while a decrease in stock on hand would not of itself be a bad sign, the decrease in liquid assets and the loss in surplus are anything but gratifying. We never have liked the way this company was mismanaged, and your strictures are only too true. Concerning the stock of merchandise on hand, we would say that one of the few things the company found to congratulate themselves on in their last report, was that they had reduced this item. The sales may be washed, but it would be fair to presume that some actual trading is done, even in this discredited industrial. We see nothing ahead for the poor stockholders and should not advise purchase of the stock. It is usually a difficult thing to get people to take a loss, but, inasmuch as there are good industrials that both pay dividends and have certain speculative value, we should not care to hold on to such a dead proposition as International Silver."

So much for one side of the shield. The reader of this opinion on the merits of the International Silver Company whose stock is quoted between 7 and 8 would certainly take a gloomy view if the investment values of industrial securities, but on the other hand the United States Steel Corporation has succeeded in holding its common stock, which represents nothing but blue sky, around the 40's, and its preferred around the 90's. Glucose Sugar Refining Co. stock has had its vicissitudes, but its common stock was listed at 39, closing December 26, and its preferred was 96.

The consolidation that controls its own raw material to a large extent and embraces concerns handling a predominating percentage of the business in their line, thrive and manage to keep even their oceans of watered stock at a fair figure considering its underlying value; but trusts which started out with large manufacturers on the "outside" and who have no special advantages in the purchase of raw material, have so far proven themselves to be decidedly up against it.

* * *

THE factory of the Smith-Denny Extract Company, Omaha, Neb., has been purchased by a stock company whose capital is held entirely by members of the Omaha Retail Grocers' Association. This marks a new departure in merchandising, as co-operative manufacturing is the next step beyond co-operative buying. If I were going into the manufacture of extracts I would want no better stock in trade than the assured patronage of the retail grocers in a city of 300,000 people, and if the stockholders in this company stick together there is no reason why this factory should not pay handsomely.

The only articles which hardware dealers could handle in sufficient bulk to make co-operative production a success are nails and barb wire, and while during the days of the nail pool in 1896 talks of coöperative nail manufacturing were rife, nothing ever came of the matter.

* * *

THE makers of machinery aim to make their products to run with as little noise as possible. There is no doubt, however, that many people do not object to the talk of machinery. In the case of many machinery operatives, the ear is often a better guide than the eye. The machinist knows just how his machine should sound, and any variation in that sound tells him that something is going wrong, just as a doctor can tell by listening whether his patient's heart is doing its duty or not. It is well-known that people born and brought up in the city find the country painfully silent. The myriad noises of the city make music which is a part of their life, and which is soothing to them. If the puff of the exhaust of the two cylinders on a locomotive are not evenly timed it indicates to the engineer that the adjustments are wrong. There is after all something to be said for the hum and clatter and click of machinery, whether a locomotive, a typewriter, or a watch, for the ear as well as the eye is informed of what is going on.

* * *

I FREQUENTLY see letters from dealers asking what slicer has the highest cutting qualities. In response would state that this honor unquestionably belongs to the Rev. Dr. Thomas R. Slicer, whose remarks before the League of Political Education in New York City recently were cutting in the extreme. Mr. Slicer says that "much of the business of this world is done on lower levels, which are not yet human." He further declares that no one is interested in Carnegie but in the disposal of his millions of dollars. While he stated that for 20,000,000 years the universe has been developing man, he sneered at the doctrine of the survival of the fittest.

* * *

GROUND was broken for the forthcoming St. Louis Exposition on Dec. 20, last.

News Siftings.

The Phœnix Iron Works, capitalized at $30,000, are a new Portland, Ore., concern.

The Bramhall-Duparquet Co., Chicago, have certified to a change of their name to the Bramhall Range Co.

Oscar Millsap, Claus Drabel and Walter D. Elmer are the incorporators of the Faultless Mfg. Co., Chicago, capitalized at $10,000 to manufacture steel stoves and ranges.

W. H. Cribben, secretary and treasurer of the Cribben & Sexton Company, Chicago who has been quite ill from pneumonia for the past two weeks has happily recovered and is back at his desk again.

Chauncey H. Castle, of the Comstock-Castle Stove Co., Quincy, Ill., was a recent caller at THE AMERICAN ARTISAN office. Mr. Castle reports that the outlook for the ensuing year is unusually good.

C. L. Featherstone, formerly representing the Brand Stove Co., Milwaukee, Wis., has resigned, to accept a position as traveling representative of the Joliet Stove Works, Joliet, Ill., in Minnesota.

F. L. Shafer, 269 Dearborn street, Chicago, manufacturer of a variety of attractive advertising specialties, sends us a very handsome Morocco pocketbook, which we have found very convenient for carrying editorial cash.

William E. Hartman, James L. Delong, Charles F. Delong, Charles T. Moore, W. F. McCrea and Ralph Harris are the parties interested in the Keystone Mfg. Co., McKeesport, Pa., who have just started in the manufacture of stoves, gas ranges, stove fittings, etc.

"A Burning Question" is the title of a little circular sent us by the Galusha Stove Company, Rochester, N. Y., calling attention to the merits of the Norman stoves and to the fact that this firm are ready to ship the trade on a moment's notice as many stoves as they can sell, as their stock is constantly complete.

The Home Stove Co., Indianapolis, Ind., will be represented by the following traveling corps for the year 1902: R. A. Henry in southern Indiana; W. W. Clayton in northern Indiana; J. C. Henley in southern Illinois; Albert Miller in Illinois; J. S. Cactot in Ohio; C. W. Aldrich in Iowa and E. Hemsteger in Pennsylvania.

On the 16th day of December suit was brought in the United States Circuit Court, Eastern District of Michigan, by Wm. T. Black and Otto Germer, of the firm of Black & Germer, Erie, Pa., against The Art Stove Company, of Detroit, Mich., for infringement in the manufacture of the fire pot of the 20th Century Art Laurel.

We acknowledge our indebtedness to the Quincy Stove Mfg. Co., Quincy, Ill., for a very handsome morocco pocket-book. This contains a spacious compartment for bills as well as a neat compartment for cards, change, etc. It is very stylish in shape and will be keenly appreciated by this firm's friends in the trade who receive these dainty and useful gifts.

We are indebted to the Oliver Iron & Steel Company, Pittsburg, Pa., for a very handsome present in the shape of a Morocco pocketbook. This very handsome pocketbook contains calendars for 1902 and 1903, a pass over the Allegheny & Southern Railway Co., as the trolley line leading to their plant is styled, two card cases and a large compartment for carrying bills, etc.

The Danville Stove & Manufacturing Company, Danville, Pa., makers of the Beaver stoves and furnaces, send us a pretty calendar showing two little girls, one in pink and the other in blue, dressed in old-fashioned costumes. One of these calendars will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

An important change has been made in Gruenhagen Bros., the well known stove jobbers at St. Anthony Park, Minn. On December 23 this firm, which was composed of E. D. Gruenhagen and W. H. Gruenhagen, dissolved partnership by mutual consent. W. H. Gruenhagen will continue the jobbing business of this firm, and E. D. Gruenhagen will devote his attention to the retail department of the St. Anthony Hardware Company.

C. J. Wormnest, Grand Rapids, Mich., has been appointed general agent for the state of Michigan for the Quincy Stove Mfg. Co., Quincy, Ill. Mr. Wormnest is an experienced and energetic stove man and was formerly representative of the Enterprise Stove Co., Vincennes, Ind. He will undoubtedly prove very successful in pushing the up-to-date line of goods made by the concern with which he is now associated in the Wolverine state.

The calendar the Sheridan Stove Mfg. Co., Quincy, Ill., are sending the trade is very striking, on account of its exquisite lettering in gold and silver. The center of this calendar shows their flashing trade-mark throwing out beams of silver light, while above and below it appear the top and bottom of a golden stove. The effect of the whole is unusually rich. The trade, in writing for one of these calendars, should kindly add: "Saw it in THE AMERICAN ARTISAN."

The Presbrey Stove Lining Co., Taunton, Mass., send us a handsome calendar for 1902. In the picture on this calendar the central figures are a young Puritan couple, gazing off into the distance at a ship, while in the distance one sees other detached groups on the same barren shore. The suggestive title of this picture is "Returning Home." The trade should write this firm for one of these pretty calendars. When writing them, kindly add: "Saw it in THE AMERICAN ARTISAN."

The Chicago office of the Abram Cox Stove Company will be represented by the following salesmen during the ensuing year. Warren W. Rusco and W. W. Barrick in Chicago and suburbs; O. C. Harrison in Wisconsin and the northern peninsula of Michigan; T. M. Gillfillan in Minnesota, North Dakota and South

Dakota; C. H. Parmelee in Washington, Montana and Idaho; L. A. Munn in Iowa; Walter M. Hogan in Illinois and southern Michigan; W. F. Garretson in Indiana and Ohio; Howard Reed in Kansas and Oklahoma; and Lewis H. Painter, in Nebraska and Colorado.

The Buckwalter Stove Co., Royersford, Pa., send us a very handsome calendar for 1902, showing a young lady, in operatic costume, descending a flight of stairs and carrying a bunch of American Beauties in her hand. The background shows a handsome green vase, mounted on a white pedestal. Around the top of the picture is a semi-circle of bunches of violets. One of these pretty calendars will be forwarded the trade on application. When writing for same, kindly add: "Saw it in THE AMERICAN ARTISAN."

F. & L. Kahn & Bros., Hamilton, O., will be represented on the road during the forthcoming year by the following traveling representatives: Geo. E. Arndt in Illinois and Iowa; E. S. Kurtz in Missouri and Kansas; W. L. Nesbitt in Minnesota, North and South Dakota; F. T. Meharry in Indiana and Wisconsin; Chas. E. Draper in Indiana and Kentucky; H. R. Stokes in Ohio and Michigan; David F. Kahn in the west and on the Pacific Coast; H. W. Hunter in the eastern states, and J. L. Wyatt in the southern states.

The trade will regret to learn of the death of Arthur Warren Elliott, son of Geo. W. Elliott, of 2 Devon street, Roxbury, Mass., which took place at that city December 13, last, the funeral being held at the residence on Monday, December 16, at 2 p. m. While the deceased was not identified with the stove business, all his family are, his father being widely known in the eastern stove world. Arthur Elliott was a young man of high character and exceptional promise, and his taking off at the threshold of his career is a sad blow to his family, who have the sympathy of the trade in their bereavement.

A dispatch from New York states that Clifford W. Perkins, A. S. Meeken and K. K. McLaren are the incorporators of the American Stove Company, incorporated in New Jersey, December 20, with a capital stock of $125,000. This dispatch further states that this new company will be the basis of a stove trust, with a capitalization of several millions. If all the "stove trusts" whose incorporation under the laws of New Jersey has been heralded by the daily press as an end of competition in stovedom, should all see the light simultaneously, there would be pretty nearly a score of stove consolidations all doing business at the same time.

It has been the custom of the Ringen Stove Company, St. Louis, Mo., for several years past to present a calendar to their friends in the trade which has been duly appreciated on account of its usefulness. These can be hung on the wall or set on a desk. This calendar is not only very convenient but will remind the user of daily duties and will thus obviate the annoyance which is sure to rise when business appointments are forgotten. We wish to thank this firm for sending us one of these calendars of theirs for the year 1902. It is not only admirable for daily reference as to appointments, etc., but has a red tin back which gives it unusual stability.

The Buckwalter Stove Co., Royersford, Pa., send us a handsome morocco covered memorandum book for 1902. This is of pocket size, contains calendars for 1902 and 1903, values of foreign coins, weight per bushel of grain, brief farmers' laws, interest laws and statistics of limitations, tables of weights and measures, useful information for business men, interest calculations, the population of leading cities, rates of postage, maps of the United States, Cuba and the Philippines, spaces for memoranda for every day of the year, pages for addresses, etc. One of these handsome and useful booklets will be forwarded the trade on application. When writing for same, kindly add: "Saw it in THE AMERICAN ARTISAN."

The Standard Lighting Co., Cleveland, O., will, from all indications, do a larger business than ever with their "Standard" Wickless Blue Flame oil stove for coal oil or gasolene. This stove has been handled since it was first placed on the market by the following well known jobbers, viz., F. M. Borden & Bro., Philadelphia; Eugene Munsell & Co., New York, N. Y.; The S. M. Howes Co., Boston, Mass.; W. B. Belknap & Co., Louisville, Ky.; Farwell, Ozmun, Kirk & Co., St. Paul, Minn.; Holbrook, Merrill & Stetson, San Francisco, Cal.; The Thos. Davidson Mfg. Co., Montreal, Quebec; Cook & Van Evera Co., Chicago; Morley Bros., Saginaw, Mich.; Townley Stove Co., Terre Haute, Ind.; F. Tiemann Stove & Hardware Co., St. Louis, Mo.; Townley Metal Co., Kansas City, Mo.; A. C. Raymer, Omaha, Neb.; and M. P. Borden Stove Co., Denver, Col.

The Favorite Stove & Range Co., Piqua, O., will be represented on the road during 1902 by the following traveling representatives, viz., W. H. Pier in Wisconsin; W. L. Miller in Iowa and Northern Illinois; J. W. Cassell in Central and Southern Illinois; T. T. Crandall in Michigan; W. C. Smith in Northern Ohio and New York; W. S. Gibson in Central Ohio; Cloyd Smith in Southern Ohio and the South; S. M. Wallace in Central and Western Pennsylvania; B. M. Shook in Eastern Pennsylvania; J. E. Shroyer in Southern Indiana; and J. Frank Knight in Northern Indiana. The trade will also be visited by salesmen representing the various branches of this house in territory tributary to their respective locations, viz., St. Paul, Chicago, Baltimore, Buffalo, Omaha, Ottumwa, Detroit, St. Louis, Salt Lake City, Ogden, La Crosse and Menominee.

The Ringen Stove Company, St. Louis, Mo., will be represented during 1902 by the following corps of traveling salesmen: E. L. McBride will care for the trade in Nebraska, North and South Dakota, sections of Missouri and northern Minnesota; L. A. Buck will have southern Minnesota, Wisconsin, Texas and Arkansas; Wm. S. Ley will visit the friends of Quick Meal goods in southern Michigan, sections of Ohio, Indiana and Kentucky; Geo. H. Barnum will call on dealers in Kansas, Oklahoma, Indian Territory and part of Wisconsin; A. X. Smith will visit Iowa dealers; H.

P. Gingrich will be kept busy looking after the needs of Illinois dealers; T. S. Alford will visit Colorado, Wyoming and New Mexico; John A. Preston will look after the Florida trade and Bert M. Denison, 538 Stevenson street, San Francisco, will sell "Quick Meal" steel ranges in northern California and Oregon.

Black & Germer, Erie, Pa., will be represented on the road during 1902 by the following efficient corps of traveling salesmen: N. H. Tighe will look after their interests in eastern Wisconsin, northern Michigan and Chicago; T. J. Duffy Jr., will visit the trade in their behalf in Minnesota, North Dakota and South Dakota; E. B. Waterman will have northern Iowa, western Wisconsin, Minnesota and South Dakota as his territory; D. J. Steele will act as a Radiant Home Missionary in Colorado, Kansas, Nebraska and Utah; W. J. Farrell will visit southern Iowa, Kansas and Oklahoma; Arthur Carson will supply the wants of Illinois dealers, W. S. Jackson will visit dealers in Kentucky, western Ohio and southern Michigan; Frank Thompson will have eastern Ohio and western Pennsylvania as his territory, and D. E. Magee will travel through Indiana, western New York, central Pennsylvania and Virginia. The Ringen Stove Company, St. Louis, and the O K Stove & Range Company, Louisville, are respectively general southwestern and general southern agents for this line.

The Excelsior Stove & Manufacturing Company, Quincy, Ill., send us a batch of leaflets describing various of their popular stoves and ranges. The Ensign National heater, with hot blast down draft, is mounted with extra-heavy high-grade polished steel body, with cast top and cast bottom. The top is provided with a cast cooking cover under the swing top. The linings are extra heavy steel placed in sections, thus allowing free expansion. The Excelsior cast top air-tight wood heater is made of polished steel mirror finish. It has extra heavy steel linings, swing cover and cast cooking cover, special leg fasteners, screw draft making air-tight fittings, top draft producing hot blast and saving fuel, front draft cap that is removable, and steel linings in four sections, allowing for expansion and making these linings very durable.

The Air-Blast National is a soft coal heater whose body is made of No. 18 gauge heavy boiler iron, polished mirror finish. It is seated in the cast bottom with asbestos and is securely held in place by cast iron cleats and bolts, making an absolutely air-tight joint it is claimed. The cast linings are high over the fine line and protect the body thoroughly from burning out. The bottom is of one piece, solid cast iron. Air is admitted through the upper draft and is carried down to the upper gas ring where it passes entirely around the gas ring and is admitted through small openings, forcing the hot blast to the center of the fire. The top is provided with an extra large feed door and check draft in the pipe collar. It is bolted to the body on the outside, all bolts being fully protected from the fire and easily removable. This firm would be pleased to send their trade literature to dealers on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

RADIANT HOME STOVES AND RANGES.

Black & Germer, Erie, Pa., send us their latest handsome catalogue of Radiant Home stoves and ranges. This firm call particular attention to the Radiant Home steel range, fitted with patented air blast linings. In the linings are cast a number of self-cleaning cells and slots, extending from the bottom to the top, through which the air is heated and forced by specially constructed duplex grates, causing the fire to burn from the lining to the center. The proper amount of oxygen is admitted through the slots and mixes thoroughly with the gases and fuel.

The Radiant Home steel range has body of Wood's hammered, polished steel. It has double walls lined with asbestos, is hand-riveted every two inches, has pocket cement joints, large sheet flues and cast back flue. This range has double flue bottom, preventing chilling of oven, cemented oven tops, heavy single oven bottom thoroughly riveted and braced to prevent buckling, ventilated oven, Radiant Home screw draft in ash pit door, Radiant Home direct draft damper which, when opened, heats the entire top of range, and sectional ring griddle. Other features are double-latched spring oven door with malleable iron hinges, all cast removable reservoir attachment, and removable duplex grates. The nickel plated parts include top band extending around end shelf of reservoir, oven door frame handle and panel, fire door panel and handle, corner brackets on back strip, reservoir panel, screen draft, clean-out panel, towel rod, shaker, lifter, knobs and bolts.

Other of the goods shown in this up-to-date volume are Radiant Home cast ranges, Radiant Home cooks, Radiant Home base burners, Radiant Home Air Blast, Radiant Home Oak, Home Air Blast, and Oval wood heaters.

One of these catalogues will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

MONARCH MALLEABLE IRON AND STEEL RANGES.

The Malleable Iron Range Company, Beaver Dam, Wis., send us their latest handsome catalogue showing their live line of Monarch malleable iron and steel ranges. The ovens in these ranges are riveted to malleable iron frames, which in turn are riveted to the bodies of the ranges, giving strength and rigidity. The flush reservoir is made of copper, tinned inside and is heated by contact with a plate at the right end of the range and is surrounded by a casing open at the bottom. The Monarch grates are duplex, made in two parts. All sized ranges burn hard coal, soft coal, lignite or wood with equal success. The firebox is large and is made with heavy sectional linings. A wide space and perfect circulation of air between the oven and back wall of the firebox adds much to the durability of these parts.

The Monarch ranges have a malleable iron shoe in their back flue to prevent damage from creosote. In lining these ranges, asbestos is riveted to a sheet

of steel and the steel in turn is attached to the body of the range, with the asbestos exposed to the fire. The asbestos serves to reflect the heat back on the oven. The malleable frames are finished with an aluminum plating which is very durable. A convenient part of the trimming is the protecting bar which is nickel plating tubing extending across the front of top, secured by small brackets at each end.

The Mound City ranges are made with entire top of malleable iron. It is polished and easy to keep clean.

The Mound City ovens are made strong and seams secure and tight, with malleable iron frames. The flues are lined with heavy asbestos board riveted to the body of the range and made secure by large washers. The body oven closet and all steel parts of Mound City ranges are made of cold-rolled range-body steel, annealed and patent leveled. The body is enameled, giving it a handsome, glossy appearance. The oven door, fire door, panel and name plate are nickel plated. A nickeled protecting bar is provided across the front of top. One of these catalogues will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

THOROUGHLY COVER THE COUNTRY.

The Monarch Stove & Manufacturing Company, Mansfield, Ohio, have made very comprehensive arrangements for the speedy and systematic distribution of Monarch vapor, oil, and gas stoves and ovens, for 1902.

The New England trade will be supplied through the agency of Gurney & Co., Boston, Mass.

New York, northern New Jersey and western Connecticut will be supplied by their New York City branch, A. L. Camfield, manager, 284-286 Pearl street, New York.

Eastern Pennsylvania, southern New Jersey and the South Atlantic states will be cared for by their Philadelphia branch, 107 North Second street, that city, A. H. MacAdams, manager.

Their Pittsburg branch, at 203 Wood street, Pittsburg, R. E. Edmonds, manager, will supply these goods to western Pennsylvania dealers.

Their Cincinnati branch, at 419 Pike Building, Cleveland, Ohio, with H. R. Bruce & Co. as agents, will furnish Monarch goods to dealers in southern Ohio, southern Indiana, Kentucky and Tennessee.

Bartlett & Norris, Lincoln, Neb., will supply Nebraska, northern Kansas and the Black Hills.

The Newby Stove Repair Company, Kansas City, Mo., will supply the trade in southern Kansas and Oklahoma.

The Kellogg & Stokes Stove Company, Denver, Col., will supply Colorado and Utah.

W. H. Gruenhagen, St. Anthony Park, Minn., will supply Minnesota, North Dakota and Montana.

In addition to this splendid network of branch offices and agencies, reaching from the Atlantic to the Rocky Mountains, this firm will be represented on the road by C. E. Bartenbach and Geo. N. Martin in Ohio, N. S. Joslin in Indiana and eastern Illinois, D. W. Burns in Michigan and M. F. Stellwagen in Wisconsin.

This firm have added a number of additional patterns to the Monarch line and have also augmented their output by a complete new line of Wickless Blue Flame oil stoves with "student lamp" construction.

STOVE FIRM ISSUES AN ALMANAC.

The Charter Oak Stove & Range Company, St. Louis, Mo., send us a very interesting booklet in the shape of a Charter Oak illustrated almanac for 1902. This almanac gives a calendar for 1902, astronomical storm chart with forecasts of weather for the ensuing year, in which intense cold is predicted for January 9 to 11, hail storms January 19 to 20, severe storms February 10, storms February 25, 26 and 27, and so on, including sleet December 28, 1902. There are also a number of humorous stories, pictures, facts about Uncle Sam's new possessions, lists of festivals, legal holidays, eclipses, etc. for 1902, housekeeper's memoranda, and also a variety of cuts of the firm's latest designs in stoves. This book of fifty-two pages contains a fund of humorous and useful information, and will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

E. C. HANRAHAN STEPS OUT.

The many friends of E. C. Hanrahan, for the past nine years with the Peninsular Stove Company and for the most of that time in charge of their important Chicago office, will be surprised to learn that he has severed his connection with that firm. Mr. Hanrahan has always been recognized as a brainy, conscientious and indefatigable worker. He started in business at the early age of 11, and for nearly thirty years has proven himself a glutton for hard, persistent work.

For many years he was with Bucks Stove & Range Company, of St. Louis, and left them to become secretary and treasurer of the Schaab-Hanrahan Stove Company, of St. Louis. He left this firm to become identified with the Peninsular Stove Company. Mr. Hanrahan, in a recent favor to a friend, expresses himself as follows: "I feel I am entitled to a rest and I am going to take it."

Augusta K. Gibbs, E. A. Selfridge, Chas. E. Miller, H. J. Morton, Louis Sloss, Jr., A. L. Scott, Joseph Sloss and D. H. Kane are the incorporators of the Pacific Hardware & Steel Co., of San Francisco, capitalized at $10,000,000 and incorporated at Camden, N. J., Dec. 25, last. The stock of this concern is divided into $7,000,000 common and $3,000,000 preferred, bearing a six per cent cumulative dividend. The object of the corporation is to carry on a general mercantile business and mining operations, and to acquire and carry on the business now carried on in San Francisco by Miller, Sloss & Scott and the George W. Gibbs Company. While its terms of incorporation are decidedly broad, its real purpose is to carry on a wholesale hardware and iron business.

The Hardware Record.

American Hardware Manufacturers Association.

Pres., Fayette R. Plumb, Philadelphia.
V.-Presidents, Samuel Nicholson, Providence; C. S. Van Wagoner, Cleveland; F. S. Kretzinger, Fort Madison, Ia.
Secy-Treas., F. D. Mitchell, Pittsburg.
Ex. Com., Robert Garland, Chairman, Pittsburg; Henry B. Lupton, Pittsburg; N. A. Gladding, Indianapolis; W. S. McKinney, Allegheny, Pa.; Samuel Disston, Philadelphia; C. E. Adams, Cleveland; James P. Kelly, Alexandria, Ind.; J. C. Birge, St. Louis.

Arkansas Retail Hardware Dealers' Association.

Pres., John M. Pitman, Prescott.
1st V.-P., J. F. Maxey, Ozark.
2d V.-P., T. B. Stewart, Newport.
Secy-Treas., J. A. Plummer, Marianna.
Ex. Com., H. Williams, Hot Springs; J. H. Boicourt, Little Rock; J. W. Lee, Fordyce.

Chicago Retail Hardware Dealers' Association.

Pres., D. McLaughlin.
V.-P., H. E. Gnadt.
Sec., G. R. Lott.
Collector, John Hora.
Treas., J. L. Smith.

Hardware Merchants' and Manufacturers' Association of Philadelphia.

Pres., Hugh McCaffrey.
V.-P., Wm. C. Peters.
Sec.-Treas., T. James Fernley.
Directors, William W. Supplee, Samuel Disston, John H. Griffith, James H. Ritter, William C. Peters, Thomas Devlin, Fayette R. Plumb, Hugh McCaffrey, T. James Fernley.

Illinois Retail Hardware Dealers' Association.

Pres., H. G. Cormick, Centralia.
V.-P., Wm. Bittel, Peoria.
Sec., G. R. Lott, Chicago.
Treas., F. F. Porter, Chicago.
Ex. Com., Z. T. Miller, Bloomington; W. T. Gormley, Chicago; H. N. Murphy, Galesburg; C. Mauer, East St. Louis; C. Williams, Streator; L. Babst, Kankakee.

Indiana Retail Hardware Dealers' Association.

Pres., W. P. Lewis, New Albany.
V.-P., Jas. L. Hutton, Portland.
Sec. and Treas., M. L. Corey, Argos.
Members Ex. Com., I. A. Sibley, South Bend; E. M. Bush, Evansville; W. H. Weed, Vincennes.

Indian Territory Retail Hardware Association.

Pres., Geo. W. Mowbray, Tulsa.
1st V.-P., J. G. Smith, Canadian
2d V.-P., Fred Parkinson, Wagoner.
Treas., Sam R. Frazee, Vinita.

Iowa Retail Hardware Dealers' Association.

Pres., W. A. McIntire, Ottumwa.
V.-P., E. G. Penrose, Tama.
Sec., W. H. Keating, Ottumwa.
Treas., Geo. Lister, Manchester.
Ex. Com., A. C. Heyman, Miles; L. Lindenberg, Dubuque; F. S. Narum, Waukon; E. G. Penrose, Tama; W. A. McIntire, Ottumwa; L. H. Kurtz, Des Moines; H. A. Cole, Council Bluffs; Harry Vincent, Ft. Dodge; W. H. Miller, Cherokee; M. W. Keating, Afton; Jacob Seither, Keokuk.

Kansas Hardware Dealers' Ass'n.

Pres., Geo. F. Andersen, St. Marys.
V.-P., Oscar Roehr, Topeka.
Sec., J. A. Cole, Topeka.
Ex. Com., James H. Hamilton, Arkansas City; E. I. King, Logan; T. H. Kiniry, Beloit; J. M. Walters, Robinson; F. W. Bartlett, Kansas City.

Kentucky Retail Hardware and Stove Dealers' Association.

Pres., Geo. Dehler, Louisville
1st V.-P., J. S. Ogden, Ashland.
2nd V.-P., Chas. D. Winn, Paris.
Sec., Paul Wagner, Louisville.
Asst. Sec., Wm. Dehler, Louisville.
Treas., Henry Heick, Louisville.

Michigan Hardware Association.

Pres., H. C. Minnie, Eaton Rapids.
V.-P., Geo. W. Bruske, Saginaw.
Sec., Fred H. Cozzens, Detroit.
Treas., Henry C. Weber, Detroit.
Ex. Com., Samuel Winchester, Jackson; Fred S. Cook, Fowlerville; C. E. Pipp, Otsego; A. Harshaw, Delray; A. J. Scott, Marion City; James J. Potter, Alpena; Jno. W. Jochin, Ishpeming; Robt. G. Chandler, Coldwater; John Popp, Saginaw, F. S. Carlton, Calumet.

Minnesota Retail Hardware Ass'n.

Pres., W. H. Tomlinson, LeSueur.
V.-P., H. S. Cleveland, Minneapolis.
Sec., T. McCracken, Minneapolis.
Treas., G. M. Evanson, St. Peter.
Ex. Com., F. H Hunt, Red Lake Falls; B. J. Kernkamp, St. Paul; Julius Schmidt, Wabasha; W. H. Tomlinson, LeSueur; A. C. Hatch, Battle Lake; Jos. Mason, St. Peter; Chas. F. Ladner, St. Cloud; S. R. Nelson, Owatonna; E. H. Loyhed, Faribault.

Missouri Retail Stove and Hardware Dealers' Association.

Pres., B. F. Naylor, Marshall.
V.-P., Geo. R. Plowman, St. Louis.
Sec., F. N. Neudorff, St. Joseph.
Ex. Com., R. L. Hixon, Hannibal; F. A. Kannsteiner, St. Louis; J. W. Poland, Carrollton; W. A. Wingert, Kansas City.

National Hardware Association.

Pres., R. A. Kirk, St. Paul.
1st V.-P., John C. Koch, Milwaukee.
2nd V.-P., Brace Hayden, San Francisco.
Sec.-Treas., T. James Fernley Philadelphia.
Ex. Com., W. K. Belknap, Louisville; Samuel A. Bigelow, Boston; P. E. Strauss, Boston; J. D. Moore, Birmingham; R. M. Dudley, Nashville; W. S. Wright, Omaha.
Advisory Board, W. W. Supplee, Philadelphia; H. H. Bishop, Cleveland; John Bindley, Pittsburg; R. W. Shapleigh, St. Louis.

National Retail Hardware Dealers' Association.

Pres., W P. Lewis, New Albany, Ind.
V.-P., Geo. Hubbard, Flint, Mich.
Sec., M. L. Corey, Argos, Ind.
Treas., H. T. Helgeson, Milton, N. D.
Ex. Com. Z. T. Miller, Bloomington, Ill.; Fred Neudorff, St. Joseph, Mo; I. A. Sibley, South Bend, Ind.; H. A. Cole, Council Bluffs, Ia.; H. G. Cormick, Centralia, Ill.

North Dakota Retail Hardware Dealers' Association.

Pres., H. T. Helgesen, Milton.
V.-P., H. N. Joy, Hamilton.
Treas., W. H. Pinkerton, Lakota.
Sec., C. N. Barnes, Grand Forks.
Ex. Com., H. Harrington, Fargo; W. W. Jamieson, Wahpeton; H. F. Strehlow, Casselton; I. L. Newgard, Grafton; H. B. Allen, Jamestown; H. A. Mae, Church's Ferry.

Ohio Hardware Association.

Pres., O. M. Scott, Marysville.
V.-P., W. P. Bogardus, Mt. Vernon.
Cor. Sec., Geo. Gray, Coshocton.
Fin. Sec., Will C. Jones, Columbus.
Treas., H. G. Woodward, Sidney.
Ex. Com., Geo. B. Meyer, Cincinnati; Geo. V. Guyton, Ada; H. F. Rahe, Cleveland; J. Rohrbacher, Akron; A. H. Strome, Warsaw; Frank Winters, Lancaster; James B. Carson, Hamilton; J. W. Brown, Washington Court House.

Pennsylvania Retail Hdw. Ass'n

Pres., Geo. L. Moore, Brownsville
V.-P., Geo. J. Rudolph, Pittsburg.
Sec'y, J. F. Frye, Charleroi.
Treas., B. A. Maggine Braddock.
Ex. Com., A. L. Casselbury, Pittsburg; E. E. Lyon, Greensburg; C. N. Savage, California; B. A. Maggine, Braddock; C. O. Shroyer, Dawson.

Philadelphia Hardware Ass's.

Pres., Julius M. Aff.
V.-P., C. F. Geissler.
Sec., T. B. Hendricksen.
Treas., Edward H. Shannon.
Trustees, Frank Schmidt, Aaron I. Sanson, Jr., Lewis C. Glading.

St. Louis Stove Dealers' Ass'n.

Pres., F. A. Kansteiner.
1st V.-P., Aug. Steinmeyer.
2d V.-P., Aug. Gruendler.
Sec., A. F. Geschwindner.
Treas., L. J. Boehl.

Southern Hardware Jobbers' Ass'n.

Pres., J. D. Moore, Birmingham.
1st V-P., F. A. Heitman, Houston.
2d V.-P., Bruce Keener, Knoxville.
Sec., C. B. Carter, Knoxville, Tenn.
Ex. Com., W. M. Crumley, Atlanta, Ga.; O. B. Barker, Lynchburg, Va.; Chas. H. Ireland, Greensboro, N. C.; B. F. Eshleman, New Orleans.

Texas Hardware Jobbers' Ass'n.

Pres., F. A. Heitman, Houston.
1st V.-P., J. C. Bering, Houston.
2d V.-P., Ed. Strauss, Waco.
Sec.-Treas., Robert Eikel, Houston
Ex. Com., Jas. Moroney, Dallas; R. F. Bell, Weatherford; W. L. Sanford, Sherman; A. E. Goeth, Austin.

Wisconsin Hdw Dealers' Ass'n.

Pres., John Hessel, Antigo.
V.-P., Otto Schlafer, Appleton.
Sec., C. A. Peck, Berlin.
Treas., George Leverenz, New Holstein.
Ex. Com., Henry Droegkamp, Milwaukee; Arthur Heins, Tigerton; E. H. Ramm, New London; J. Wilkie, Fond du Lac.

C. H. Reynolds & Co. have sold their hardware store at Memphis, Mich., to Bartlett & Co.

Fleece, Moore & Co. have sold out their hardware store at North Salem, Ind., to Click & Son.

It is said that the Waukesha Sheet Steel Co., Waukesha, Wis., will shortly erect a tin plate plant.

Geo. Sperry, Kalamazoo, Mich., will move his stock of hardware to 128 W. Main street, that city, on the first of next month.

The capital stock of the Reliable Incubator & Brooder Co., Quincy, Ill., has been increased from $20,000 to $60,000.

R. V. Clark, Geo. Fischer and A. L. Niemeyer are the incorporators of the Modern Iron Works, Quincy, Ill., capitalized at $40,000.

William E. Becker, Edward C. Becker and Richard Moore are the incorporators of the Becker-Moore Paint Company, St. Louis, Mo.; capitalized at $40,000.

John S. Bolton, Moline, Ill., manufacturer of hardware specialties, have recently purchased the business of the American post hole digger and transplanter,

S. S. Ingram and Chas. H. Bryan are among the incorporators of the Georgetown Hardware & Plumbing Company, Georgetown, S. C., capitalized at $5,000.

The Hammar Paint Company has been incorporated at St. Louis by P. G. Hammar, F. V. Hammar and P. F. Hammar. Their capital stock is $500,000.

A meeting of retail merchants in South Dakota will be held at Sioux Falls on January 21, next, for the purpose of reorganizing the South Dakota Retail Merchants' Association.

We acknowledge the receipt of a cordial invitation from Farwell, Ozmun Kirk & Co., St. Paul, to attend their fifth annual banquet which will be held at the Hotel Ryan at 7 p. m. on the evening of Dec. 30th.

Geo. W. Pringle, William Brodie and John C. Pirie are the incorporators of the Pringle & Brodie Machinery Co., Chicago, capitalized at $25,000, for the manufacture of machinery and hardware.

Nathan L. Clement, Arthur A. Clement and Robert J. Kerr are the incorporators of the American Wire Fence Co., of Chicago, capitalized at $100,000 for the manufacture of wire, wire fence and other wire products.

The Buckeye Paint & Varnish Co., Cleveland, O., send us a handsome steel rule, encased in a morocco case. The case containing this rule calls attention to the fact that this is the only firm who make crystal Rock finishes.

The projected meeting of South Dakota hardware dealers in conjunction with the meeting of the implement men of that state at Sioux Falls, December 12, failed to materialize as no retail hardware men were notified that any such meeting was proposed.

The Norvell-Shapleigh Hardware Co., St. Louis, Mo., are sending the trade, without charge, a handsome glass paper weight, showing a cut of their new building.

Dealers in writing for one of these weights should kindly add: "Saw it in THE AMERICAN ARTISAN."

C. L. Capen, S. A. Knott, J. W. Crigler, Alexander Keady, C. A. Dennis, H. J. Schoeffer, E. C. Hewitt and A. G. Carahan are the incorporators of the Normal Novelty Works, Normal, Ill.; incorporated with a capital stock of $500,000, to manufacture hardware specialties.

Frederick P. Swift, Jay Charles Davis and John Milton Ferry are the incorporators of the Page Woven Wire Fence Co., Adrian, Mich. Capitalized at $6,000,000, $1,000,000 of which is preferred stock, with 7 per cent non-cumulative dividends. This firm's sales for November last were $135,000 as against $55,000 in the best preceding November.

The Grand Rapids Refrigerator Co., Grand Rapids, Mich., send us a very beautiful 1902 calendar. This shows a pretty green glass vase, filled with a variety of exquisite roses. The finish of the picture is unusually good, as the water and the stems of the flowers can be seen through the glass side of the vase. The trade should certainly write this firm for one of these artistic calendars. When writing them, kindly add: "Saw it in THE AMERICAN ARTISAN."

Paul Wagner, a hardware dealer located at Eighteenth and Harney streets, Louisville, Ky., who is secretary of the Kentucky Retail Hardware and Stove Dealers' Association, is the winner of a prize offered by an afternoon paper of that city to the father having the largest number of children in attendance at the public schools of that city. Although only 40 years old, he has ten children, ranging in age from fifteen down to three, eight of whom attend the public schools of Louisville. His wife is three years his junior.

On December 20th the J. Stevens Arms Tool Co., Chicopee Falls, Mass., announced the result of the rifle contest they had held and prizes were sent to different boys in different sections of the country. The conditions were that the boys be under 20 years of age and the range be 75 yards off-hand open sight. G. Bowers, of Elm Grove, W. Va., was the lucky boy winning first prize with a perfect score of 50. Mr. Gould, editor of Shooting and Fishing, New York, was the judge of the contest.

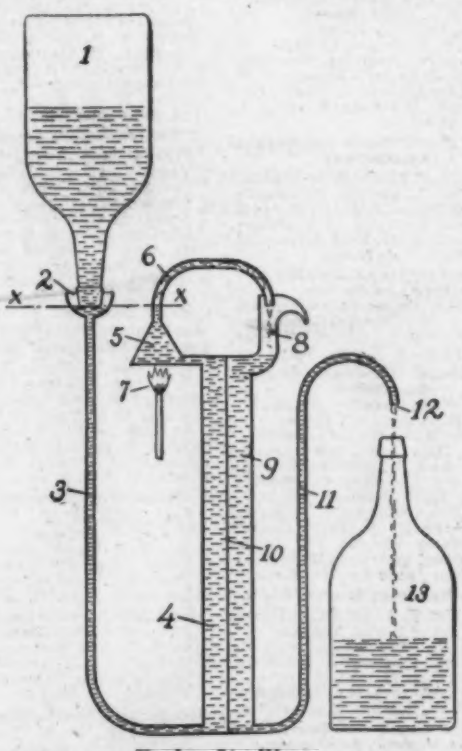
The firm were so greatly pleased with the success of this contest that they will repeat it on a more extensive scale next year, offering prizes aggregating $1,000.

The National Sweeper Co., Marion, Ind., advise us that, owing to the rapid growth of their business, they have decided to dispose of their wringer department and will hereafter confine their efforts to the manufacture of carpet sweepers exclusively. This new wringer company will put in a complete rubber plant, in which all of the rolls and other rubber parts used in the manufacture of their clothes wringers will be made. In addition to the rubber plant, a large foundry will be put up where all the castings used in the manufacture of the "Magnet Brand" of clothes wringers will be made, thereby putting them in a position to turn out wringers as cheap as good wringers can be made. The present plan calls for an expenditure of $40,000 to $50,000 for these and other improvements, and with the good start that the National Sweeper Company has given this branch of their enterprise, a large and profitable business in this line will eventually be built up.

Chas. D. Brown, 160-162 Duane street, New York, sends us a little circular showing the Star food chopper, a feature of which is a plate hinged at the top of the hopper, which, when pressed on the food to be cut, forces it upon the feed screen, preventing the possibility of injuring or even soiling the fingers. The Star will cut into coarse or fine pieces, without crushing, raw or cooked meat, sea food, fruit, vegetables, etc. This chopper is made in three styles, viz., No. 0 Family, No. 1 Medium, and No. 3 Large. The No. 0 Family chops two pounds per minute, has hopper 2¼x3¼ inches in diameter, barrel 2 inches in diameter, and weighs 3½ pounds. Three cutters (coarse, medium and fine) go with each machine.

THE FORBES STERILIZER.

The Forbes Co., 1234 Callowhill St., Philadelphia, Pa., are manufacturers of the Forbes sterilizer, shown in the accompanying cut. This sterilizer renders water absolutely free from disease germs by boiling



Forbes Sterilizer.

and delivers it unchanged in taste and at nearly the same temperature as it had when entering the apparatus. Ice water may be supplied to the sterilizer, boiled and discharged again ice cold.

Figure 1 is a purely diagrammatic view of the No. 1 or aerostatic feed apparatus, and serves to explain the method of operation.

The raw or unsterilized water is supplied from the inverted bottle 1. The water runs from the bottle 1 into the cup 2, then down through the pipe 3 into the compartment 4 of the heat exchange (there

are several of these compartments), which it fills. When compartment 4 is filled the water runs into the heater 5 and rises in the pipe 6 to the level X, where it stops. No more water will now run out of the bottle 1, because its mouth is sealed by the water in the cup 2 at the level X. The burner 7 is now lighted and heat is applied under the heater 5, which causes the water in the heater to boil, and in boiling it rises in the pipe 6 and flows over into cup 8, just as a pot on a cooking range will boil over. It is, therefore, impossible for any water to pass through the apparatus until it has boiled, for it is only by boiling that it can rise sufficiently in the pipe 6 to flow over into the cup 8. This boiling lasts for but the fraction of a second, and once the water has passed through the pipe 6 it is removed from where heat can again reach it. When some water has boiled over, as above stated, the level of the water in the heater 5 and likewise the level of that in the cup 2 is lowered. This exposes the mouth of the bottle 1, so that a small quantity of air enters the bottle and allows a corresponding quantity of water to run out of the bottle and refill the cup 2 and heater 5 up to the level X again, when the mouth of the bottle is again sealed by the water, and no more water can run out of it until the level is again lowered by reason of more water boiling over through the pipe 6.

This action becomes continuous, for the flame 7 is constantly boiling the water in the heater 5 and causing it to flow over through the pipe 6. The water continues to boil over into the cup 8 and quickly fills compartment 9 of the heat exchange. When compartment 9 is filled, the water runs out of the pipe 11 at the opening 12 into the receiving bottle 13. While passing down through the compartment 9 the heat of the water, which is boiling hot, is transferred, by conduction, through the thin metal partition or diaphragm 10 to the cold water passing up through compartment 4, so that the water which is boiled in the heater 5 passes out of the apparatus nearly as cold as that entering, while the cold water entering the apparatus becomes heated as it passes up through compartment 4, and reaches the heater 5 in a very hot condition and nearly at the boiling point.

Therefore, the only heat which has to be supplied to keep the apparatus running continuously is that necessary to bring the already highly heated water entering the heater 5 to the boiling point, and cause it to rise above the normal water level X and boil over through the pipe 6, and so pass on through the remainder of the apparatus to the discharge outlet 12.

CHICAGO HARDWARE BOWLING LEAGUE.

The four leaders in the Chicago Hardware Bowling League took a rest the past week and allowed the second division to have a monopoly of carnage.

C. Sidney Shepard & Co.'s team anticipated New Years Day by a whole week and "reformed" in their downward course, winning three straight. The H. Channon Co. team were in a receptive mood and Crerar, Adams & Co. enacted the role of beneficent Santa Claus and bestowed 2 out of 3 games in their Christmas stocking. As a result of the various railroads, spares and occasional strikes rolled the H. Channon Co. and C. Sidney Shepard Co. are well in the front of the second division and Crerar, Adams & Co. have gained a slight lead on Crerar, Adams & Co.

	Won	Lost.	P. C.
Hibbard, Spencer, Bartlett & Co.	30	3	909
Vaughn & Bushnell Mfg. Co.	21	9	700
Geo. B. Carpenter & Co.	23	10	697
Orr & Lockett Hardware Co.	15	15	500
H. Channon Co.	13	20	394
C. Sidney Shepard & Co.	12	21	364
Crerar, Adams & Co.	8	25	242
W. D. Allen Mfg. Co.	7	26	212

AN ARTISTIC CALENDAR.

The accompanying cut shows an artistic calendar that the Peters Cartridge Company, Cincinnati, Ohio, are issuing for 1902.

Of course it cannot do justice to the rich tints of the calendar itself.

The background of the calendar is dark red, over

Peters' Cartridges.

a portion of which are sketches in gold, showing a sportsman shooting from a gunning skiff, a hunter behind a rock preparing to make a shot on a deer, and a gunner afield with dog, shooting quail. The most striking part of the calendar is a series of circles made up of the heads of Peters' rim and central-fire metallic cartridges, and heads of Peters' shotgun shells. Between the outer circles and the next are excellent pictures of feathered game; between two other circles are the heads of furred game, consisting of caribou, cougar, moose, elk, deer, bear, antelope and lynx. The center piece is the head of a big horn or mountain sheep. The heads of the cartridges are in gold.

Dealers should write this firm for one of these calendars. When writing for same, kindly add: "Saw it in THE AMERICAN ARTISAN."

Heating and Ventilating.

The Equitable Furnace Co. are a new New York City concern, capitalized at $50,000.

The Van Auken Temperature Controlling Company, Chicago, have changed their name to the Consolidated Engineering Company.

Jos. P. Grey, J. T. Lellyet and W. A. Stewart are the incorporators of the Nashville Steam Heating Company, Nashville, Tenn, capitalized at $10,000.

Thomas Merritt Jr., is president and Fred E. Talcott is treasurer of the Heating Appliance Company of America, Augusta, Me., capitalized at $150,000, for the purpose of manufacturing automatic heat-regulating appliances.

Carl Bjarkman has been arrested in New York City on the charge of entering a house for purposes of robbery on the false pretext that he was an inspector in the employ of the New York Steam Heating Co., and had been sent to disconnect the steam pipes temporarily on account of a break.

The Kelsey Furnace Co., Syracuse, N. Y., will be represented on the road the following year by the following corps of salesmen: A. Hopkins will look after their interests in Michigan, Ohio and Indiana, M. J. Kelsey will travel through the New England states, Harry W. Bradley will explain the merits of Kelsey generators to furnace dealers in Pennsylvania, Delaware, Maryland and Virginia and E. H. Bradley will have New York state as his bailiwick.

The Lake Erie Specialty Manufacturing Company have been organized, with headquarters at Geneva, Ohio, for the manufacture of Fuller bath cocks, Fuller basin cocks, stop and waste cocks, sill cocks and compression work of all kinds. As fast as competent men can be secured and the proper machinery installed they will make additions to this line of goods and bath room fixtures in general. The men at the head of this concern are all experienced and capable business men, including T. H. Russell, president; E. M. Converse, vice-president; V. L. Atkins, secretary; C. J. Chamberlin, treasurer, and J. H. Lyons, superintendent.

The Akron Furnace Company, Akron, Ohio, send us an interesting circular describing their Solid Comfort furnace. This firm do not employ any traveling salesmen, and make a specialty of carload orders. This furnace is all cast, suitable for a low cellar, with large ash pit and ash pit door. The anti-clinker grate can be taken out through the ash pit door and taken apart without loosening a nut. The grate is heavy and durable. The fire pot is corrugated, allowing for expansion and is made in two sections. The dome is made corrugated, wth cast iron patented air blast, simple and easy to adjust, and extra large feed door. The one-piece, solid cast radiator is extra large, with three large flat upright side surfaces to radiate heat. The radiator has an adjustable flue plate that can be placed in same through the feed door without taking down the furnace. This furnace is heavy and durable, has a very attractive design and extra good castings and mounting.

PHŒNIX FURNACES

The Phœnix Iron Works, Utica, N. Y., are manufacturers of the Phoenix furnaces, one of the styles of

Phœnix Furnace Style A Straight Casing.

which is shown herewith. The casings of this firm's furnaces are all double, made of the heavy, best bloom, galvanized iron for the outer casing, with an inner lining of black iron, leaving an air space of 1½ to 2 inches. This extra wide space is one of the peculiar features of this line.

The only grates used in these furnaces are Palmer's famous patent triangular revolving hollow-bar grate. These are triangular in form, cast hollow, making them stronger and more durable than the old style solid bars. The cold air passes through them and cools and prevents them from burning or warping out of shape. In these grates each and every bar is independent of the other, connected together by heavy cogs or gears and held in position by heavy dove-tailed loops, which can easily be removed if necessary to replace a bar at any time, without dumping the fire. The fire pots are large and deep and larger at the base than at the top. The feed sections have five air flues.

It is said that the various consolidations in the window glass industry, viz., The American Window Glass Co., Independent Window Glass Mfg. Co., and Federation Co-operative Window Glass Co., will consolidate to check the present sharp competition in their line.

The American Bicycle Company is going through a thorough course of departmental reorganization.

ASCERTAINING RADIATION.

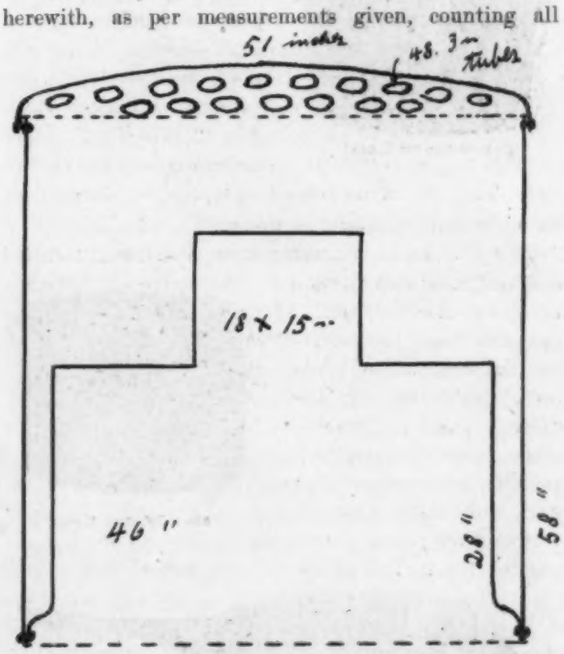
TO THE AMERICAN ARTISAN.

We draw you below a sketch of a steel boiler which will be brick encased, the idea being to have the flames pass through the flues around the boiler to front, passing down and then back again, to the rear of the boiler and out through the chimney. The dimensions are as follows: Height of shell, 58 inches; diameter of fire pot, 46 inches; diameter of shell, 51 inches; number of tubes, 48—3 inch tubes 30 inches long, tubes measuring on the outside. The height of fire pot from grate is 28 inches. The combustion chamber is 15x18 inches in diameter. Kindly advise us how many feet of radiating surface this boiler will supply with steam at three pounds pressure. Also how many square feet radiating surface boiler will supply with water at 185 degrees of temperature. Also advise us of the manner of ascertaining this amount. JOHN S. JOHNSON.

Chicago, Dec. 20, 1901.

ANSWER BY JAMES J. LAWLER.

A boiler, constructed as shown in the sketch herewith, as per measurements given, counting all



exposed surfaces, which seems to be the intention, would contain just about 200 square feet of heating surface. According to the custom of ascertaining the heating capacity of house-heating steam boilers, 15 square feet of boiler surface is called one horse power, and under favorable conditions, such as using a good grade of coal with a proper draft, as well as the necessary grate surface, the one-horse power is known by practical tests to supply 100 square feet of direct radiation with a pressure from two to four pounds per square inch. And as this boiler has a surface of 200 square feet, divided by 15, gives us 1333, which is the amount of direct steam radiation the boiler should supply. Next, to find out the capacity of this same boiler for *hot water* radiation at 185 degrees temperature, we proceed as follows: Knowing that steam at four pounds pressure gives a temperature of 225 degrees, which is 40 degrees higher than water at 185 degrees, and which is leaving out a small fraction, 1-6 less, than the steam in degrees of heat, we now divide the steam capacity of the boiler 1333 feet by 6, which gives us 222, and this is the amount of extra radiation for water over that of the steam which the boiler will supply, and which is direct water radiation at 185 degrees, 1555 square feet. It is the custom among boiler men, and it holds good, to allow one-third more radiation for water over the steam rating of a boiler, and when we calculate on steam at 5 pounds pressure and on water at 180 degrees, this allowance of one-third extra surface for water will be found practically correct. An important feature in proportioning boilers is to have the grate area to correspond with the heating surface, and this, too, has been ascertained by many practical tests, safe enough to follow which is to allow 1 square foot of grate for 36 square feet of boiler-heating surface, and, according to this, 5½ square feet of grate would be ample for this boiler, although six square feet of grate surface would be satisfactory, and, therefore, the boiler in question having a grate surface of about 11 square feet is just about one-half too large for its heating surface for economy in the consumption of fuel.

THE COMMERCIAL RATING OF BOILERS.

If our subscriber's boiler is intended for the market, it is well for him to know what the present custom is with makers of boilers in regard to a guaranteed capacity, and the following was adopted by the Carbon Club about a year ago. *Ratings of steam boilers* are based on a standard of two pounds steam pressure at the boiler, and a standard of water 180 degrees temperature at the boiler. If boilers in operation come up to these standards, the guarantee of the manufacturer is fulfilled and any further difficulties must be settled by the contractor. The ratings also include the surface exposed in supply and return pipes. So that if a job requires 1,000 feet of direct radiation, the amount of surface exposed in the piping must be added to determine the size of boiler required. In an average job of steam or hot water, the piping will expose about 25 per cent of the surface in the radiators, or in a job that requires 1,000 feet of radiation, 250 feet, making a total of 1,250 the boiler must carry, hence a boiler of that capacity must be purchased. Then, if the job, when completed, shows the two pounds steam pressure, or 180 degrees water temperature at the boiler, it has fulfilled the purpose for which it was sold, and the manufacturer's responsibility ceases.

On Dec. 18th the large new steel plant of the Parkersburg Iron & Steel Co., Parkersburg, W. Va., was formally opened. The plant was christened by Miss Bertha B. Budke, daughter of Superintendent Budke, of this plant, who smashed a bottle of champagne on one of the great engine wheels. Over 350 people attended this opening. This plant represents an investment of $500,000 and three shifts of men working eight hours each will be employed.

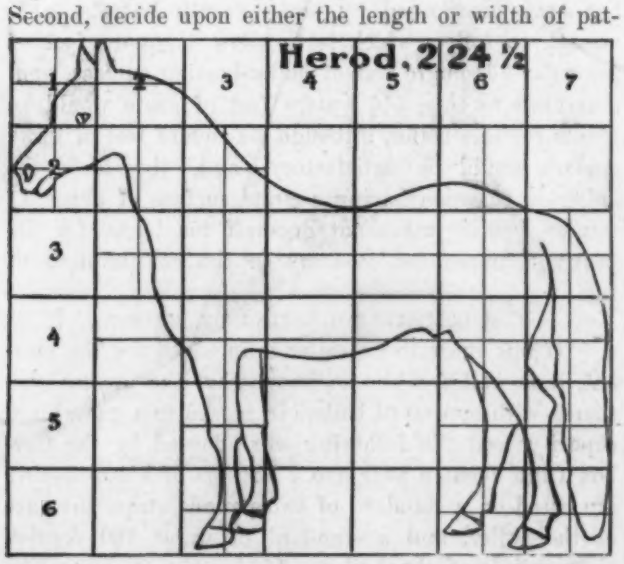
This plant will be devoted exclusively to the rolling of sheet steel. It has six stands of hot mills and four of cold mills. There are ten sheet and pan furnaces built in blocks of five. There is also a large annealing furnace and pickling machine.

Tinshop.

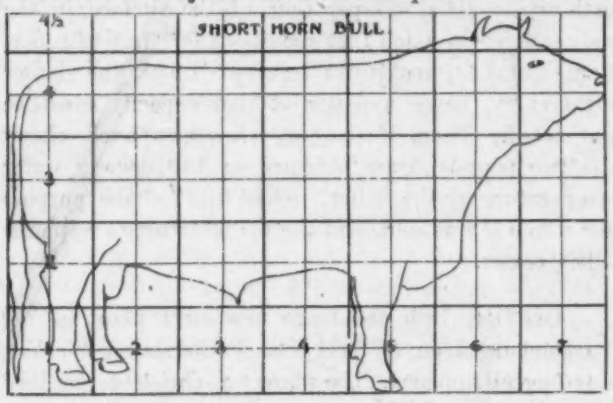
PATTERNS FOR HORSE AND BULL.

TO THE AMERICAN ARTISAN.

I know of but two ways to obtain the desired pattern of horse and bull requested by Mr. Rowland: One way is to draw it off hand, but this is rather difficult unless one is blessed with considerable artistic tastes and ability. So for one with little or no experience in drawing I should resort to the process known as blocking. First, obtain a profile picture of object desired. Second, decide upon either the length or width of pat-



tern, which in your case is 3½ feet long, or 42 inches; divide this into any convenient number of parts (the more parts the easier the drawing); 42 inches can be easily divided into seven equal parts (6 inches each). Next divide the length of picture into as many corresponding equal parts. Then mark off the picture into squares corresponding to these parts in size. Subdivide any squares having any irregular short, crooked lines of outline of object. Next divide pattern into same



number of squares as picture, transferring subdivided squares to corresponding square of pattern. Then fill in outline of object, only one square at the time, noting carefully where line of object crosses line of square. With a little patience and care any school boy can draw the desired pattern. (Be careful to mark in right square corresponding to picture.) BUNYAN E. ANDERSON.

Dawson, Minn., Dec. 23, 1901.

The shipments of tin plate from Llanelly, Wales, during the quarter ending September 1, 1901, was 14,102 tons, as against 12,318 for the preceding quarter.

PAINT FOR ROOFS.

TO THE AMERICAN ARTISAN.

Mr. A. E. Palmer will find a paint composed of strictly pure linseed oil and English Venetian red to be about as good a paint for tin roof as I know of. Use nothing but pure oil and English Venetian red instead of the American. It is a little more expensive but is worth it. Apply two thin coats instead of one heavy one. Roofs thus painted have lasted twelve years.

BUNYAN E. ANDERSON.

Dawson, Minn., Dec. 23, 1901.

SOLID STEEL POLISHED AND TINNED GOODS.

The Cleveland Stamping & Tool Co., Cleveland, O., are manufacturers of "Solid-Steel" polished and tinned goods, examples of which are shown in the accompanying cuts. "Solid-Steel" polished seamless spiders have a solid handle. They are made seamless from one piece of 14 gauge steel. The "Solid-Steel" taper stove kettles are seamless. They are made from 16 gauge steel, with flat or round bottom, polished or tinned.

Taper Stove Kettle.

This firm make hot water urns, both lava enameled and in "Solid-Steel." These urns are made from 16 gauge steel and are designed for saloons, barber shops and private families. Their "Lava" enameled ware is made from steel, rolled especially for them, and covered with three coats of a very hard and elastic enamel, the surface of which is as smooth as the most

Hot Water Urn.

delicate china. The inside or lining is a pure white porcelain; the outside is white, mottled with a delicate shade of brown.

A PROGRESSIVE FIRM.

The Canton (Ohio) News-Democrat, of December 20, gives an interesting account of the wonderful growth of the Berger Manufacturing Company of that city. It is indeed hard to believe that in 1886 the Berger Manufacturing Company only had six employes! To-day there are over 350 men on the pay rolls of their shop, and their office force alone consists of 48 men.

Much of the progress of this firm is due to the management of Ed. A. Langenbach, secretary and general manager, who has systematized the operation of

the factory, each department working under a separate superintendent, who reports to the general manager.

In the first department special designs of cornice and arches are produced.

In the second department the product is roofing and siding, including imitation brick and stone.

The third department is devoted to the manufacture of all styles of tubular lanterns, including street lamps, railroad lanterns, oil cans, pumps, etc. The painting has a department to itself.

The metal ceiling department is one of the most important. All styles of metal ceilings are produced, the styles and designs being highly artistic. Then there is the galvanizing department, a shipping department and a separate place for fireproofing.

Eighteen traveling salesmen are on the road selling the products of the plant, and branch houses have been established in New York, Boston, Philadelphia, Chicago and St. Louis. Agencies have also been established all over the country.

NOTES AND QUERIES.

INDEPENDENT NAIL MANUFACTURERS.

From "Reader," Cleveland, Ohio.

Can you give me a list of independent nail manufacturers?

Ans.—The following independent firms make wire nails: Belfont Nail Company, Ironton, Ohio; Kelley Nail & Iron Company, Ironton, O.; Union Steel Company, Pittsburg, Pa.; Braddock Manufacturing Company, Braddock, Pa.; Sharon Steel Company, Sharon, Pa.; Crawfordsville Wire & Nail Company, Crawfordsville, Ind.; Cuyahoga Steel & Wire Company, Cuyahoga Falls, O.; Illinois Wire Company, Des Plaines, Ill.; Chicago Tack Company, Chicago, Ill.; Grand Crossing Tack Company, Chicago, Ill.; Indiana Wire & Fence Company, Crawfordsville, Ind.; North-Western Barb Wire Company, Sterling, Ill.; American Wire & Nail Company, Anderson, Ind.; F. E. Kohler & Company, Canton, Ohio; Milwaukee Tack Company, Milwaukee, Wis.; York Tack and Nail Works, York, Pa.; Old Dominion Iron & Nail Works, Richmond, Va.

B. P. S. PAINT.

From Anton Popelar, Dodge, Neb.

Who makes the B. P. S. paint?

Ans.—Patterson, Sargeant & Co., Cleveland, Ohio.

ITEMS.

Follansbee Bros., Pittsburg, Pa., are erecting a new three-story warehouse, 120x160 feet in dimensions, at Second and Short streets, Philadelphia.

The Franklin Galvanized Ware Mfg. Co. are a new Franklin, Ind., concern, who will manufacture a line of galvanized steel tanks, tubes, buckets, half-bushel measures, etc.

Moses Geil, Aaron Adelman and Henry Cohen are the incorporators of the Chicago Tin Company, Chicago; capitalized at $20,000, for the manufacture of tinware.

A. Vogler, Henry Goldsmith, L. S. Rassieui, A. Vogler, Jr., and A. W. Vogler are the incorporators of the A. Vogler Sheet Metal Mfg. Co., St. Louis, Mo., capitalized at $15,000.

Geo. N. Lyman, Harry B. Signor and Geo. D. Bardou are the incorporators of the Metallic Mfg., Plating & Enameling Co., Chicago, incorporated with a capital stock of $2,500.

The Empire Tin Can Works, Geneva, N. Y., are preparing to make extensive improvements to their plant. They are making arrangements for a building 150 feet long and 108 feet wide. They are also erecting a new power house 40x50 feet in dimensions.

The J. M. & L. A. Osborn Co., Cleveland, and Columbus, manufacturers and jobbers of tin-plate, metals and roofers' supplies, are forwarding their friends in their trade some very pretty blotters with holly border, bunches of Christmas bells in the four corners, and a cordial extension of the compliments of the season to the recipients.

The Canton Machine & Mfg. Co., Canton, O., are placing in a new line of tinners' machines on the market, including 10-foot combination conductor pipe and eave-trough forming machine, a 10-foot beading machine for eave-trough, a 10-foot power conductor-pipe corrugating and grooving machine, a 10-foot power edging machine for conductor pipe, and a step joint cutting and folding machine.

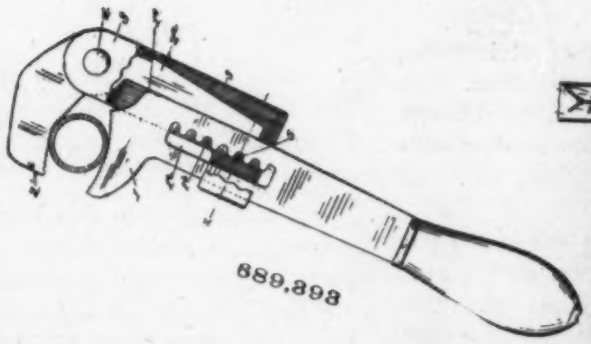
C. T. Childers, president, and I. H. Willis, secretary and treasurer of the Galesburg Cornice Works, Galesburg, Ill., had a pleasant surprise Christmas eve. Their foreman, G. L. Gray, approached them stating that their 20 union men had a grievance they wished heard. On their meeting with their employes they were each presented with a handsome silver trimmed ivory rule.

The trade will learn with deep regret of the death of James Hicks of the Cincinnati Corrugating Co., Piqua, O. Mr. Hicks was a genial, whole-souled man of wide popularity and many friends. His death took place at the Waldorf-Astoria Hotel on Dec. 26th from blood poisoning. A few days before his death he was licking an envelope when the sharp edge of the paper cut his lip, and blood poisoning set in. He leaves a widow, a daughter of ex-Mayor Thomas of Cincinnati.

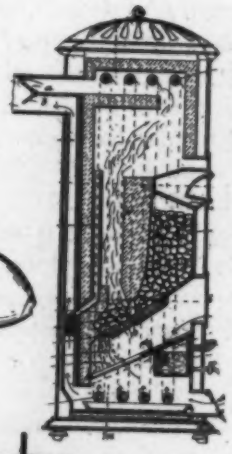
Clarke Merchant, who is well known in the metal world as president of Merchant & Co. Inc., of Philadelphia, is also president of the Schuylkill Traction Company. He recently offered to distribute 10 per cent of the gross receipts of the company the week ending December 21 among the employes as a Christmas present. The receipts for this week were unusually small owing to severe storms, so Mr. Merchant determined that the men should suffer no diminution in the amount of the gift through this unforeseen interruption of traffic, changed the date of the gift week to Saturday, December 21 to Friday, December 27, inclusive. The employes showed their appreciation of this kindness by passing resolutions to that effect.

New Patents.

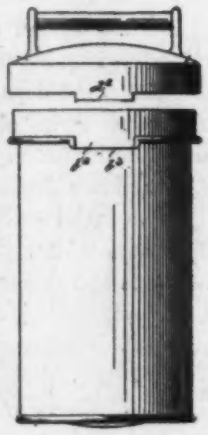
689,639



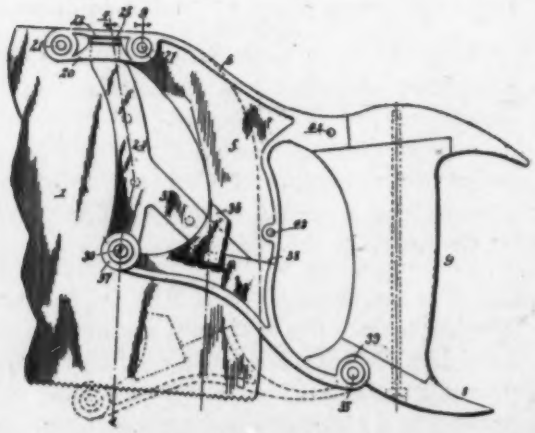
689,393



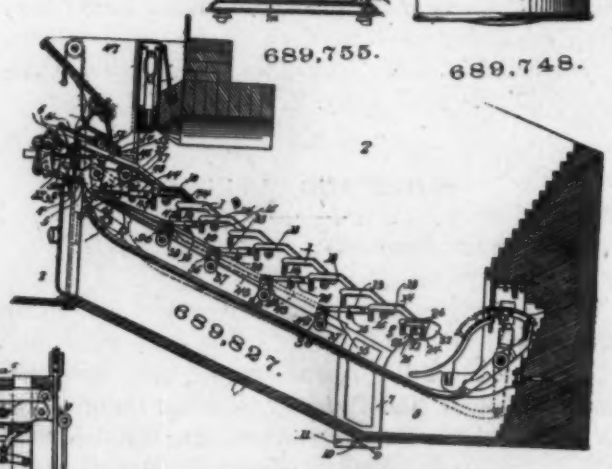
689,755.



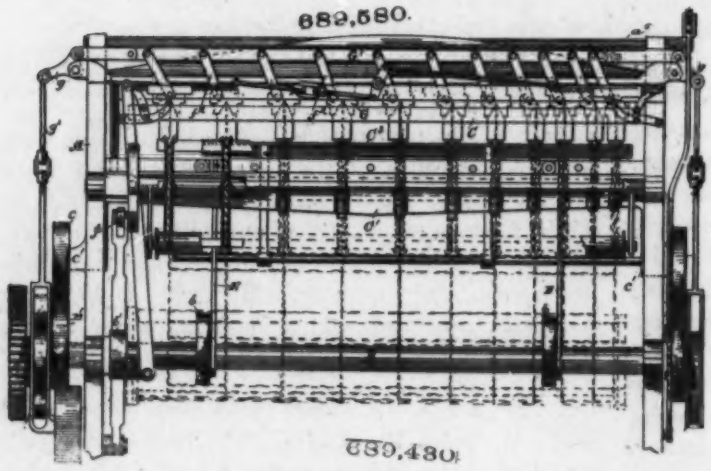
689,748.



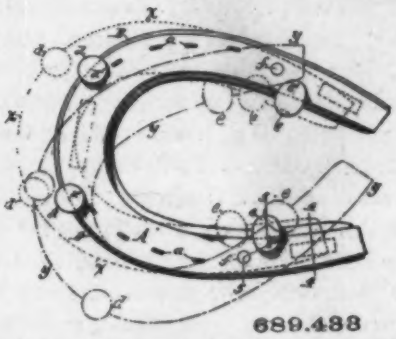
689,580.



689,827.



689,430.



689,433

689,430—Machine for Making Wire Fencing. William C. Smith, Glenville, and Jonathan Harris, Cleveland, Ohio.

689,827—Grate for Furnaces. William McClave, Scranton, Pa.

689,580—Detachable Saw-Handle. Hugh Evans, Buffalo, N. Y.

689,433—Horseshoe. William Tharby, Buffalo, N. Y.

689,748—Ice-Cream Can. Joseph Quinn, Philadelphia, Pa.

689,755—Heating Apparatus. Johann Schumann, Lemberg, Austria-Hungary.

689,639—Ice-Cream Freezer. Henry G. Cordley, Glenridge, N. J.

689,393—Wrench. Ottmar A. Gatrell, Columbus, Ohio.

A FULL BLOWN MAN.

There is a young criminal lawyer in this city, who, on the occasion of his becoming of age, began the celebration of his birthday in a way that caused his household a great deal of consternation.

On the eve of the fete, shortly after midnight, the young man's family were suddenly startled from their slumbers by a loud voice in the house calling, "There's a man in the house! There's a man in the house!"

The valiant paterfamilias rushed from his room, bearnig in his hands a heavy billet of firewood, to learn the cause of the disturbance and to capture the intruder. His son was standing in the hall, shouting at the top of his voice.

"Where's the man?" exclaimed the old gentleman.

"Here, sir; here!" proudly replied the young man. "This is he. At last I'm 21!"—Memphis Scimitar.

A NEW COMPOSITION OF STEEL.

A German mechanician claims to have invented a composition of steel twice as hard as any ever yet made, while the cost of production is put by the lucky inventor at fifty per cent lower than that of ordinary steel. It is stated that the Technological Department of the Charlottenburg Technical Institute have confirmed the claim of the inventor. Hence one is disposed to conclude that there's something in it.—Ex.

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Horse-Shoes.

Old Dominion Iron & Nail Works 55

House-Furnishing Goods.

Blacklock Foundry..... 54
Cleveland Stamping & Tool Co... 56
Enterprise Mfg. Co..... 53
National Enameling & Stamping Co..... 51
Sperry, D. R. & Co..... 59

Knives.

Smith & Hemenway Co..... 13-53

Lawn Mowers.

Philadelphia Lawn Mower Co..... 56

Lawn Sprinklers

Smith & Hemenway..... 13-53

Lamps

Acorn Brass Works..... 44-57
Chicago Solar Light Co..... 56
Imperial Gas Lamp Co..... 57

Metal Shingles.

Burton, W. J. & Co..... 17
Cortright Metal Roofing Co..... 59
Garry Iron & Steel Roofing Co.... 45
La Crosse Steel Roof & Cor Co... 47
Montross Metal Shingle Co..... 46

Metals-Perforated.

Aitchison, The Robt Perf'd Metal Co..... 47
Harrington & King Perforating Co 60

Metallic Shutters.

Berger Mfg. Co..... 48
Burton & W J. Co..... 17
Canton Steel Roofing Co..... 48
Garry Iron & Steel Roofing Co.... 45
La Crosse Steel Roof & Cor Co.. 47

Mica

Asheville Mica Co..... 49

Mitre Boxes.

Smith & Hemenway Co..... 13-53

Nails.

Old Dominion Iron & Nail Works 55
Union Horse Nail Co..... 55

Nail Pullers

Smith & Hemenway Co..... 13-53

Oil Stoves.

Ringen Stove Co..... 3
Schneider & Trenkamp Co..... 4
Standard Lighting Co..... 7
Twin Burner Vapor Stove Co..... 6

Paints.

Buckeye Paint & Varnish Co..... 50
Canton Steel Roofing Co..... 48
Dixon, Jos. Crucible Co..... 43
La Crosse Steel Roofing & Cor.Co. 47

Paper.

Bradner-Smith & Co..... 5

Patents.
Munn & Co. 56
Peck, Hubert 42

Plyers and Nippers.
Smith & Hemenway Co. 13-53

Polish.
Buckeye Paint & Varnish Co. 50
Hoffman, Geo. W. 50

Radiators.
American Radiator Co. 2

Razors.
Fox Cutlery Co. 54
Smith & Hemenway Co. 13-53
Utica Drop Forge & Tool Co. 13-53

Registers.
Canton Steel Roofing Co. 48
Fanner Mfg. Co. 19
Henry & Scheible Co. 14
Independent Register Co. 16
Phila. Hdw. Malleable Iron Wks. 19

Riveters
Milwaukee Automatic Machine Co 59

Roofing.
Berger Mfg. Co. 48
Canton Steel Roofing Co. 48
Cortright Metal Roofing Co. 59
Eller, J. H. & Co. 46
Garry Iron & Steel Co. 45
La Crosse Steel Roofing Co. 47
Montross Metal Shingle Co. 46
Osborn, The J. M. & L. A. Co. 60
Perkins, J. L. & Co 44-46-47
Sykes Steel Roofing Co. 45
Taylor, N. & G. Co. 60

Sad Irons.
Blacklock Foundry 54
Schreiber & Conchar Mfg. Co. 16

Sash and Spot Cord.
Samson Cordage Works 1

Sash Locks.
Harley Burglar Proof Ventilating Sash Lock Co. 57

Saws.
Atkins, E. C. & Co. 56
Disston's Henry Sons 53

Saw Sets.
Disston's, Henry Sons 53
Morrill, Chas 53
Smith & Hemenway Co. 13-53

Scales.
American Cutlery Co. 59
Pelouze Scale & Mfg. Co. 53

Screw Drivers.
North Bros. Mfg. Co. 56
Smith & Hemenway Co 52-53

Sporting Goods.
Peters Cartridge Co. 54
Stevens, J., Arms & Tool Co. 60

Skylights.
Burton, W. J. & Co. 17
Canton Steel Roofing Co. 48
Friedley & Voshardt 59
Garry Iron & Steel Co. 45
Jones, J. H. 2
La Crosse Steel Roof & Cor. Co. 47

Silverplated Ware.
Rogers, S. L. & G. H. 58

Spring Hinges.
Bommer Bros. 1

Stove Boards.
Michigan Hardware Mfg. Co. 46

Stove Bolts.
Atlas Bolt & Screw Co. 1
Fleet, C. T. 43

Stove Casters.
Independent Register Co. 16
Fanner Mfg Co. 19

Stove Guards.
Twin City Fence & Wire Works. 55

Stove Lining.
Connors, Wm. 1
Bridgeport Crucible Co. 49
Williams Stove Lining Co. 50

Stove Patterns.
Acme Pattern Works 49
Cope, Geo. W. Pattern Works 49
Gobeille Pattern Works 49
Indianapolis Artistic Pattern Wks 49
Mersfelder, W. L. 49
Weller Pattern Co 49

Stove Pipes.
Triumph Adjustable Stove Pipe Co 14

Stove Polish.
Ayling Bros. 50
Dixon, Jos. Crucible Co. 43
Wynn, Lewis D. 50

Stove Repairs.
American Stove Repair Co. 49
Brauer, A. G. 49
Depinet Foundry Co. 49
Dust, Wm. L. Stove Repairing Co 49
Great Western Stove Repair Co. 49

Stoves and Ranges.
Beckwith, Estate of P. D. 20
Champion Steel Range Co. 15
Chicago Stove Works 8
Detroit Stove Works 17
Enterprise Stove Co. 15
Excelsior Stove & Mfg. Co. 5
Malleable Iron Range Co. 1
Portsmouth Stove & Range Co. 12
Richmond Stove Co. 17
Ringen Stove Co. 3
Schneider & Trenkamp Co. 4
Sun Stove Co. 15
Tinnerman Steel Range Co. 14
White, Thos. Stove Co. 6
Willard, Wm. G. 17

Stove Trimmings.
Atlas Bolt & Screw Co. 1
Columbus Bolt Wks 1
Fanner Mfg. Co. 19

Tacks.
Tower Mfg. Co. 55

Tape Measures.
Lukfin Rule Co. 59

Tinners' Tools and Supplies.
Berger Bros. Co 47
Bertsch & Co. 45
Double Truss Cornice Brake Co. 47
Dreis, Andrews & Krump 47
Lufkin Rule Co. 59
Niagara Machine & Tool Works. 59
Perkins, J. L. 44-46-47
Stanley Rule & Level Co. 53

Tinplate.
American Tin Plate Co. 48
Illinois Roofing & Supply 45
McClure & Co. 60
Osborn, J. M. & L. A. 60
Taylor, N. & G. Co. 60

Tinware.
Cooney & Geiger 46
National Enameling & Stamping Co. 51

Toasters.
Harkins & Willis 55

Vapor Stoves.
Ringen Stove Co. 3
Schneider & Trenkamp Co. 4
Standard Lighting Co 7
Twin Burner Vapor Stove Co. 6

Ventilators.
Berger Bros. Co. 47
Berger Mfg. Co. 48
Burton, W. J. & Co. 17
Garry Iron & Steel Roofing Co. 45
Globe Ventilating Co. 1
La Crosse Steel Roof. & Cor. Co. 47
Powers Bros. 47

Washing Machines.
Brammer, H. F. Mfg. Co. 50
Clark, Quien & Morse 50
Randleman & Sons 51

Window Screens.
Phillips, The A. J. Co. 57

Wire Fences.
Twin City Fence & Wire Works. 55

COLONIAL ADMINISTRATION.

The improvement of the material, mental and moral condition of the people of a colony, and the methods applied by successful colonizing governments in that work is the subject of a chapter in the work on Colonial Administration, just issued by the Treasury Bureau of Statistics. To answer this in a single sentence would be: The introduction and extension of modern civilization and enlightenment. To answer it in detail would be to show what the great colonizing countries of the world have done for the advancement of their colonies during the nineteenth century—the introduction of roads, railways, irrigation works, river and harbor improvements, and through them the development of production, and thus of material prosperity; the encouragement of commerce and the adoption of improved conditions of life; the establishment of reliable and permanent forms of currency, with proper banking facilities for the encouragement of thrift among the natives; the establishment of postal and telegraph service for the encouragement of intercommunication among the people of the colony and between them and the outside world; the establishment of steamship lines to connect the colony with the home country and the civilized world; the encouragement of education through schools, colleges, newspapers, libraries and churches; the establishment and proper administration of laws and regulations by which public safety and order are assured.

When it is considered that in India alone, where roads were unknown when the British government assumed control, there are now 150,000 miles of road, of which over 30,000 are "metalled;" that the railways in the British colonies now aggregate 63,549 miles, against 33,000 in 1885, a growth in 15 years exceeding the entire distance around the earth; that the irrigation canals and other works of India are 36,000 miles in extent, and the area irrigated by all methods exceeds thirty million acres, and that although they have cost about 400,000,000 rupees, the value of a single year's crop in the irrigated district above that which it could produce in years of drought is more than the entire cost of the canals, the importance of these public works for the development of the agriculture and commerce will be apparent.

Avoid meanness, for there is no trait which tends to bring a merchant more readily into disrepute with his customers, says our exchange, Canadian Hardware.

We have in mind a certain retail merchant whose trait of meanness at times leads him pretty close to the verge of dishonesty.

One thing, for instance, that appears to be a common practice with him is in regard to the value he attaches to the United States 10c piece. If he takes it in over the counter from a child, he reckons it at 8c, but when he gives it out in change he values it at 10c. We know of a family who was curious enough to experiment with him in this particular, and the results were invariably the same.

The obliging shopman sent
The cheap present she had meant
To look like something costly, as it ought,
But she learned to her despair
That the price mark still was there,
And we really couldn't print the things she thought.
—Philadelphia Press.

Trade Report.

BRADSTREET'S ON IRON AND STEEL SITUATION.

The editor of Bradstreets telegraphs us this advance report of the iron and steel situation:

The year closes with a burst of activity in iron and steel. Pigiron sales for the week have never been equalled at this season, and lack of adequate transport facilities alone is a bar to a still greater volume of distribution. The outlook is for a production of 16,000,000 tons of pigiron, of 30,000,000 tons of ore and of 12,000,000 tons of steel in 1901. Prices have advanced of late, and $15.75 to $16 is freely paid at Valley furnaces for Bessemer deliveries in the first quarter of next year. In finished products the mills are crowded with business; wire rods have advanced $1 per ton. In the coke trade supplies are piling up near the ovens, but furnaces are shutting down, owing to the lack of cars to move one to the other. Some foreign steel is coming in, but most of the German products are going to England at very low prices.

WIRE NAILS.

Wire nails, in small lots from stock, are quoted at $2.25 to $2.30.

CUT NAILS.

There is little demand for cut nails, because of the low price of wire nails. Small lots, from stock, are quoted at $2.35.

BARB WIRE.

Painted barb wire is quoted at $2.70 to $2.80 in small lots, and $3 to $3.10 for galvanized, with 5 cents off for carload lots.

PLAIN WIRE.

Plain wire is quoted at $2.20 to $2.25, base, in small lots from stock.

BARS.

The demand for bar iron remains strong, and the local mills report heavy orders for the first part of next year. Actual transactions during the past week were small, mostly owing to the holidays, though the total tonnage booked this month exceeds that for a similar period in December in previous years. We quote iron and steel bars: 1.65c, Chicago; out of store, 1.90c to 2c.

SHEETS.

There is a continued good demand for this material, which the mills are unable to supply. All consumers are specifying heavily on contracts and the demand from warehouse stock is large. The mills are still months behind in their deliveries. We quote No. 27 black, out of store, 3.40c to 3.65c, and galvanized, 65 per cent to 70 and 5 per cent.

PLATES.

A large contract for plates was placed last week by the Chicago Shipbuilding Co., about 2,000 tons of which will go to the Illinois Steel Co. We quote as follows: Tank steel, base, ¼-inch, 1.75c; flange steel, 1.90c to 2c; marine steel, 1.95c; firebox steel, ordinary, 2c to 2.10c; special, 2.25c and upwards. Tank steel from store, 2c to 2.20c; flange steel from store, 2.25c.

STRUCTURAL STEEL.

There is a large demand for structural steel of all kinds, and contracts for about 15,000 tons were closed during the past week. The mills are still months behind in deliveries and are contending with a scarcity of cars. Heavy sections of beams can be secured in three months, universal plates, six to eight weeks, and sheared plates in four weeks. We quote mill shipments, carload lots, as follows: Beams, 15 inches and under, 1.75c; 18 inches and over, 1.85c; angles, 6x6 and under, 1.75c; over 6x6, 1.85c; plates, 1.75c base; tees, 1.80c; zees, 1.75c, small lots from store, ½c to ¾c higher; beams and channels from store, ½c to ¾c per pound higher.

MERCHANT STEEL.

Plenty of new business is being offered continually and consumers are specifying heavily on contracts. The mills can take only a small amount of new business, owing to the continual famine of cars. We quote mill shipments, Chicago delivery, as follows: Smooth finished tire steel, 1.85c to 2c; open-hearth spring steel, 2.25c to 2.50c; toe calk, 2.40c to 2.60c; sleigh shoe, 1.65c to 1.80c; cutter shoe, 2.40c to 2.60c and upwards; less than carload lots, 5 per cent to 10 per cent higher.

CORDAGE.

Manila rope, on the basis of 7-16 inch and larger, 12¾c to 13c per pound; sisal rope, on the same basis, is quoted at 8½c to 9¼c per pound; with a rebate of ¼c per pound allowed on both kinds of rope in large quantities.

LINSEED OIL.

City raw linseed oil is quoted at 55c per gallon in 5-barrel lots or more, and 56c per gallon in less than 5-barrel lots.

SPIRITS TURPENTINE.

Spirits of turpentine is quoted as follows: Southerns, 39c to 39½c; machine made barrels, 39½c to 40c per gallon.

WHITE LEAD IN OIL.

White lead in oil is quoted at 6c per pound in lots of 500 pounds and over; 6½c in lots of less than 500 pounds.

Quotations.

METALS.

FIRST QUALITY BRIGHT PLATES.

			Per Box.
IC	10x14		$8 75
IX	10x14		10 25
IC	12x12		9 00
IX	12x12		10 50
IC	14x20		8 75
IX	14x20		10 25
IXX	14x20		11 75
IXXX	14x20		13 25
IXXXX	14x20		14 75
IC	20x28		17 50
IX	20x28		20 50
IXX	20x28		23 50

COKE PLATES.

Cokes, 180 lbs	IC	20x28	12 70
Cokes, 200 lbs	IC	20x28	13 00
Cokes, 216 lbs	IC	20x28	13 30
Cokes, 216 lbs	IX	20x28	15 25

PIG IRON.

Lake Sup. Charcoal	$18 50@$19 00
Local Coke Fdy No. 1	16 00
Local Coke Fdy No. 2	15 50
Local Coke Fdy No. 3	15 00
Local Scotch Fdy No. 1	16 00
Local Scotch Fdy No. 2	15 50
Local Scotch Fdy No. 3	14 50@ 15 00
Southern Coke No. 1	15 65@ 15 90
Southern Coke No. 2	15 15@ 15 40
Southern Coke No. 3	14 65@ 14 90
Southern Coke No. 4	14 15@ 14 40
Southern No. 1 Soft	15 65@ 15 90
Southern No. 2 Soft	15 15@ 15 40
Southern Gray Forge	14 15@ 14 40
Southern Silveries	15 90@ 16 40
Jackson Co. Silveries	17 00@ 17 50
Ohio Strong Softeners	17 00@ 17 50
Alabama Car Wheel	20 50@ 21 00
Malleable Bessemer	16 50@ 17 00
Coke Bessemer	18 00@ 18 50

BLACK SHEET STEEL.

⅛ in. 3-16 in. Nos. 8 and 10. per lb.	$2 80
No. 12 per lb.	3 85
No. 14 per lb.	3 90
No. 16 and 18 per lb.	3 95
No. 20, 22, 24, 25 and 26 per lb.	3 90
No. 27 per lb.	4 00
No. 28 per lb.	4 10

SMOOTH STEEL.

	per lb.
Wood's Smooth Steel, 15-17	$4 00
" " " 18	4 10
" " " 20	4 20
" " " 22-24	4 30
" " " 25-26	4 40
" " " 27	4 50
" " " 28	4 60

PATENT PLANISHED SHEET STEEL.

Patent Planished Sheet Steel. "A" $10 20, "B" $9 20

GALVANIZED IRON.

Galvanized Iron 70%

SOLDER.

Extra 18½c

Commercial 17½c

SHEET ZINC.

600 lb. Casks, base ..... 7c per lb.

COPPER.

Copper ..... base, 21c

TIN PIGS AND BARS.

Banca, pigs, per lb. ..... 28¾@28½c
straits pigs, per lb. ..... 28 @28¼c
straits in bars, per lb. ..... 28¾@29c

LEAD.

American Pig ..... 4.60@4.62½c
..... 5½@5¾c

HARDWARE.

QUOTATIONS.

(The quotations given below represent the current hardware prices. They are not given as manufacturer's prices, and manufacturers should not be held responsible for them. Manufacturers sometimes name higher figures than those quoted for goods; they are not always selling at the price quoted, but goods are being sold at the figures printed below by manufacturers nd jobbers.)

ADZES—CARPENTERS'.

Hunt's	25%
White's	12½%
Coopers'—Barton's	12½%
White's	12½%
Ship—Barton's	12½%
White's	15%
Hunt's	25%

AMMUNITION

CAPS, PERCUSSION—per 1000—

F L Waterproof, 1-10s	50c
G D	40c
Eley's	52c

CARTRIDGES.

Peters Rim Fire Ctgs	50&3%
Peters Cent Fire, Pistol & Rifle	25&3%
Peters Cent Fire, Military and Sporting Ctgs	15&5%
Peters Blank Ctgs, except 22 and 32, an additional 10% from above discount.	
Peters Blank Ctgs. 22 cal	10&10%
Peters Blank Ctgs. 32 cal	10&10%
Peters B B Caps, Round ball	$1 15
Peters B B Caps, Conical ball	$1 90
U. M. C. Rim Fire Ctgs	50&3%
U.M.C. Cent. Fire, Pistol & Rifle	25&3%
Winchester Cent. Fire, Military and Sporting Ctgs	15&8%
U. M. C. Blank Ctgs. 28 & 32 cal	10%
U. M. C. Blank Ctgs. 38 cal	50-10-10%
U. M. C. B B Caps, Round Ball	$1 75..25&10%
U .MC. B B Caps, Con. Ball	$2 00 net
U. M. C. Rim Fire Shot Ctgs	50&15&3%
U. M. C. Cent. " " "	25&10&3%

PRIMERS.

Berdan Primers	$1 00
Peters Primers	1 10
U. M. C. Primers	1 08
Winchester Primers	1 08

SHELLS.

Peters Empty Paper Shells, 10 and 12 gauge. League	25&5%
Peters Empty Paper Shells, 16 gauge. League	20&5%
Peters New Victor Nitro shells	15%
Ideal	33⅓&10%
Peters Loaded Shells. League and Semi-Smokeless	40&5%
Peters New Victor Loaded Shells, with King's Smokeless	40&10&10%
Ideals Loaded with Kings Smokeless	40&10&10&5%
U. M. C, New Club, 16 guage	20&10%
U. M. C. New Club 10 & 12 gauge	33⅓&5%
U. M. C. New Club	33⅓&5%
U. M. C. Nitro	1 %
U. M. C. High Base	lb
U. M. C. Trap	33⅓&10&7%
Winchester Blue Rivals / Winchester Yellow Rivals	20%
Winchester Repeater	18%
Winchester Leader	33⅓&10&7%
U. M. C. Loaded Shells. Black Powder / Winchester Loaded Shells, Black Powder	40&5%
U. M. C. / Winchester	Smokeless 40&10&10&5%

GUN WADS—per 1000.

Peters Gun Wads	20&5%
U. M. C. Gun Wads	20&5%

POWDER.

King's Quickshot Powder; Kegs $4 00; ½ kegs $2 25; ¼ kegs $1 25.	
King's Semi-Smokeless	20&5%
King's Smokeless	25, 20 & 10
Austin Quickshot Powder, Kegs $4 00; ½ kegs $2 25; ¼ kegs $1 25.	
Dupont Smokeless, Sporting	25, 20 & 10c.

SHOT

Drop shot, sizes smaller than B, 25-lb bags, per bag	$1 65
Drop shot, B and larger sizes, 25-lb bags, per bag	1 85
Buck Shot, 25-lb bags, per bag	1 85
Chilled Shot, 25-lb bags, per bag	1 85

ANVILS.

Hay-Budden, 70 to 84 lbs	10c per lb
Hay-Budden, 85 to 150 lbs	9c per lb

AUGERS AND BITS.

Snell's Boring Mach. Augers	50&10&5%
Snell's Car Bits, 12-inch twist	40%
Jennings' Pattern Auger Bits	50&10%
Russell Jennings' Augers and Bits	25&10%
Ship Augers, L'Hommedieu Bits	15%
Irwin	50%
Climax Bits	60&10%

AWLS.

Brad, handled per doz.	$ 35
Brad, shouldered, assorted 1 to 4 per gr.	2 00
Brad, shouldered, assorted 1 to 6 per gr.	2 50
Peg, Pat. per gr.	60
Peg, shouldered per gr.	1 00
No. 1, Scratch, handled per gr.	4 80
No. 5, Scratch, socket per doz.	6 00

AXES.

Lippincott	per doz	6 50
Mann	"	6 50
Second quality	"	6 00
Beveled axes, add	"	50
Broad—		
Peerless can patt	"	28 50
Hunt's	"	30
White's	"	12%
Hand—		
Hunt's	"	40
White's	"	19%
Ship—		
White's	"	12%

AXLES.

Common iron, long arm, sq. bed	5¼
Concord iron. long arm, sq. bed	6¼
Concord express, long arm, steel, square bed	6¾
Coach shape on above, ex. per. lb.	½
Short arms on above, extra per lb.	2
Welded axles on above, ex. per. lb	1½
Half Patent, steel, Nos. 7 to 14	70
Half Patent, steel, Nos. 19 to 22	70
Extra, coach shape, 1¼ & smaller per set	15
Extra, coach shape, 1¼ 1⅛, per. set	80
Extra, coach shape, 1'g'r, per. set	$1 00
National Wrought Steel Tubular, Self-Oiling—	
Standard Farm (1 to 5) and Special Farm (A1 to A5) less than ten sets	20%
Over ten sets	25

BEAMS—SCALE.

Scale Beams, List Jan. 12, 82	35%
Frary's	40%
P. S. & W.	30%

BELLOWS.

Blacksmiths	70%
Hand, 6½ in. per doz.	$4 50
Molders', 10 in. per doz.	9 00

BELLS.

COW.

Ordinary Goods	70&10%
Hig Grade	60&10%
Jersey	75&10%
Texas Star	50&10%

DOOR.

Abbe's Gong	45%
Barton Gong	55%
Home, R. & E. Mfg. Co.'s	55&10%
er and Pull, Sargent's	20&10&10%

HAND.

Hand Bells, Polished	60@60&10%
White Metal	55@55&10%
Nickel Plated	50@50&10%
Swiss	60%
Silver Chime	33⅓@33⅓&10%

MISCELLANEOUS.

Farm Bells	lb. 2¾ to 2¾c
Steel Alloy, Church and School	50&10&5@60%
Wilmot & Hobbs Mfg. Co., Gongs	70%

BLOCKS.

Common Wooden	70%
Eddy Steel Tackle Blocks	66 2-3&10%

BOLTS.

CARRIAGE, MACHINE, ETC.

Common, list Jan. 30, 95	65%
Norway Iron, $3.00, list Oct. 7, '84	75&10%
Bolt Ends, list Jan. 30, '95	50&10%
Machine, list Sept. 20, '99	65&10%

DOOR AND SHUTTER.

Ives' Patent Door	60%
Wrought Barrel, Standard list	70&10%
Wrought Flush	40&10%
Wrought Square, Standard list	65%

STOVE AND PLOW.

Plow	40&10%
Stove, list December 28, 1899	70&70&10%

TIRE

Common, list Dec. 28, '99	70%
Eagle Philadelphia	72½%
Norway	75%

BORING MACHINES.

Jenning upright without Augers..$2 00

BOXWOOD RULES.

No. 4	$11 00	per doz
" 12	16 00	" "
" 18	6 00	" "
" 26	11 00	" "
" 27	13 00	" "
" 29	4 50	" "
" 66	10 00	" "
" 66½	10 00	" "
" 67	6 00	" "
Boxwood		80&10%
Ivory		40&10%
Lufkin's Steel		50&10%

BRACES.

Barber's	50&10%
Common Ball, American	$1 50
Fray's Genuine Spofford's	60%
Fray's No. 307 to 322	40&5%
Fray's No. 508 to 522	50%

BRACKETS.

Cast Iron Plain	50&10
Wrought Steel	70&10 @ 75%
Bradley's	75 @ 75&10%

BROILERS.

Wire Goods Co 75%

BUTTS.

Bright Butts, Nos. 800, 802, 804, 806, 808, 810, 814, 816, 818, 820, 854	70%
Bright Butts, Nos. 826, 828, 829, 830, 832, 834, 836, 838, 840, 842, 843, 844, 845, 846, 849	70%
Bright Butts, Nos. 822, 822½, 823, 823½	70%
Japanned Butts, Nos. 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 726, 727, 728, 729, 730, 731	70%

CAGES—BIRD.

Enameled	40%
Brass 1200 series	33⅓%

CASTERS.

Bed	60&10
Plate Casters	60&10
Martin's Patent (Phoenix)	50

CHAIN.

American Coil Chain, Less than Cask lots:

3-16	¼	5-16	⅜	7-16	½	9-16
8.40	6.30	5.25	4.25	4.20	4.10	

⅝ ¾ ⅞ to 1
4.05 4.00 4.00c. per lb.

Less than Cask lots add 25c.

German Coil, list July 24, '97 ..... 60&10&10%

German Halter Chain, list July 24 '98 ..... 60&10&10%

Traces, Western Standard: 100 pair
6½—6-3, Straight, with Ring 29.00
6½—6-2, Straight, with Ring 30.00
6½—8-2, Straight, with ring 34.00
6½—10-2, Straight, with ring 37.50
Add 2c per pair for Hooks.
Twist Traces 2c. per pair higher than Straight Link.

Trace, Wagon and Fancy Chains Eastern list ..... 50&10%

Jack Chain, lis July 10 '98:

Iron	60	6 ((&
Brass	60	6 ((&

Safety Chain.....70&5@70&10%
Gal. Pump Chain.....lb. 4¼@4½c
Covert Sad. Works:
Breast, Hitching and Rein Chains.....70%
Covert Mfg. Co.:
Breast.....35&2%
Halter.....35&2%
Heel.....35&2%
Rein.....35&2%
Stallion.....35&2%
Oneida Community:
Eureka Coll & Halter40&10% new list
Niagara Coll and Halters40@10% "
Niagara Cow Ties..45&5@45&10&5%
Am. Coll and Halters..50&10&5@60%
Am. Cow Ties.....35&5@40&5%
Wire Goods Co.:
Dog Chain.....60&10%
Universal Dbl-jointed Chain....50%

CHALK.

Blue.....per gross 60c
Red..... " 50c
White..... " 45c

CHALK LINES.

Chalk lines.....per doz. $2 50

CHISELS.

Mix..... } 70&5 to 70&10%
Witherby.....

CLAMPS.

No. 25 Adjustable.....50&10 to 60%
Carriage Makers..... 50&10&5%

CLEANERS.

Pot .....per doz $1.10

CLEAVERS.

Beatty's .....dis 40
White's .....dis 15

CLIPPERS.

E. H. Hotchkiss Horse Clippers
No. 10.....per doz $18 00
No. 30..... " 15 60
No. 22..... " 13 80
No. 20..... " 13 20
No. 8..... " 10 80
H. Hotchkiss Toilet Clippers
No. 1.....per doz 9 60
No. 101..... " 10 80
No. 201..... " 10 80
No. 300..... " 13 20
No. 500..... " 15 00

COFFEE MILLS.

Enter. Mfg. Co., list Jan. 17, '98....25%
Parker's.....50&10%
Arcade.....60&10%

CORKSCREWS.

Howes .....35&22½%
Humason & Beckley.....40&10%
Empire 40%
Walker's ..... net
Williamson's Regular..... 40%
Williamson's Forged Worm... 40%

DOG COLLARS.

Pope & Stevens' List:
Brass (full Assortment).....net price

DOOR CHECKS.

Blount.....30%
Eclipse.....30%
Corbin.....30%

DRILLS AND DRILL STOCK.

ommon Blacksmith's Drill ..... $1 50@$1 60
Bench Drills, Stearns'.....5 50& 6 00
Blacksmith's Self-feeding, each, ...$5 00&$7 00
Breast, Millers Falls, each ..$3 00 20%
Godell Automatic Drills,$12 00to$15 00

DRILLS—BIT STOCK.

Standard List .....60&10@70%

DRILLS—TWIST.

Standard List.....60&10@65%
Straightened taper shanks to 1½ in.

EGG BEATERS.

Standard Co.:
No. 5 Steel Handle Dover per gross..... $ 6 50
No. 10 Cast Handle Dover pr gr 8 00
No. 10 Steel H'ndle Dov'r pr gr 8 00
No. 15 Extra Heavy Steel Handle per gr 15 00
Rival per gr..... 10 00
Taplin Mfg Co.:
No. 50 Small Family size pr gr 6 50
No. 100 Regular Fam size pr gr 8 00
No. 102 Regular Family size tinned pr gr..... 9 50
No. 150 Large Fam size pr gr.. 15 00
No. 152 Large Family size tinned pr gr..... 17 00
Lyon's Standard size per doz.. 1 75
Wonder (S. S. & Co.) per gr.... 7 50

ENAMELED STEEL WARE.

Royal (N. E. & S. Co.).....Net
Peerless (L. & G. Mfg. Co.)...70&10%
Agate Nickel Steel Ware.....50&20%
Pearl Agate Ware.....50&20%
Blue and White Ware.....60&15%
All White Ware (with blue border.....50&20%
Regal Steel Ware.....60&10%

FASTENERS, BLIND.

Zimmerman's.....50&10%

FAUCETS.

Standard Metal Key.....25%
B. & L. B. Co.
Redlich's Wood Faucets.
Red Cedar ..... } Net Prices.
Oak.....
Cherry.....
Cork Lined.....
Metal Key.....
Self Measuring:
Enterprise, per doz. $36 00.....40%
Cork Lined.....70&5@70&10&5%
Metallic Key, Leather Lined .....70@70&10%
Red Cedar..... .....50@50&5%
B. & L. B. Co.:
West's Lock, Open and Shut Key..... .....50&10%
John Sommer's Peerless Tin Key..40%
" " Boss Tin Key 50%
" " Victor Metal Key..50&10%
" " Duplex Metal Key....60%
" " Diamond Lock.....40%
" " I X L Cork Lined....50%
" " Reliable " " ..50&10%
" " Common " " 70%
" " Chicago " " 60%
" " O K " " 50%
" " Perfection Cedar.....40%
Star..... .....60@60&5%
Star, Metal Plug new list... 40@40&5%
Lockport, Metal Plug, reduced list..... .....60&5%
McKenna, Brass:
Burglar Proof, N. P.....35%
Improved, ¾ and ⅞ inch.....35%
Self Measuring:
Enterprise, per doz $36.00.....40%
Lane's, per doz. $36.00.....40&10%
National Measuring, per doz $36.00..... ....40%

FILES—Domestic.

New List, Nov. 1, '99:
Black Diamond.....70&10%
Disston's.....75& 5%

Imported.

Stubs list.....

FORKS AND HOES.

Coke and Cottonseed Forks....40&5%
Coal Forks.....40&5%
Barn or Ice Forks.....40&5%
Beet Forks..... .....30&10
Ballast or Stone Forks.....40&5%
Tanners' Forks.....40&5%
Shaving Forks.....40&5%
Potato Scoop Forks.....40%
Oyster Forks.....40&5%
Sluice Forks.....40&5%
Heavy Mill, Manure or Street Forks.....70%
Steel Tar or Asphalt Rakes.....65%
Asphalt Hoes.....65%
Two Tine Hay Forks, Std. Size...65%
3 Tine Hay Forks, Std. Size....65&10%
Four Tine Hay Fork, Std. Size..66⅔%
Socket Four Tine Hay Forks..66⅔&5%
Socket Four Tine Manure Forks...70%
Socket Four Tine Spading Forks .....70&5&5&2½%
Three Tine Hay Header and Baler Forks.....67½&2½%
Four Tine Hay Header and Baler Forks.....66⅔%
Grain or Barley Forks.....70&10%
Four Tine Manure Forks.....70%
Five & Six Tine Manure Forks.....70%
Spading Forks.....70&10%
Potato Digging Forks.....65%
Stone Picking Forks.....65%
Garden Hoes.....75&5%
Meadow and R. I. Hoes...75&5&2½%
Sunbeam Meadow Hoes.....75&5&½%
Mortar and Street Hoes.....75&10%
Planter Hoes, Regular Pattern.70&20%
Tobacco Hoes.....75&20%
Cotton Hoes.....70&10&10&5&2%
Rough Fin. Shank Cot. Hoes 75&12½%
Cotton Chopper Hoes....75&10&7½%
Ladies' Cotton Hoes.....75&10&7½%

Malleable Rakes.....70@70&10%
Toy Ladies' and Boys' Hoes.....70&10to70&10&5%
Weeding Hoesand Rakes...70@70&5%
Potato Hooks.....75&5%
Hop Hooks.....60&10&2½%
Steel Garden Rakes.....70&10%
Steel Garden Rakes Stamped blank 70%
Turf Edgers.....60&5%
Steel Road Rakes..... .....65%
Special Mortar Hoes.....40&10&2½%
Harpers' No. 7 Mortar Hoes.... ..65%
Truck Hoes.....50&10&2%
Hoes.....65%
Special Hoes.....75&10&2%
Hoe Down Hooks.....75&10&2%
Warren Hoes.....60%
Laid Steel Edge Hoes.....25, 5&2%

GAUGES.

Marking, Mortise, etc.....60%
Stanley R. & L. Co.'s Butt & Rabbet Gauge.... .....Net
S. & H. Cos.....75%

GIMLETS.

Gimlets.....60%

GLASS CUTTERS

Woodward.....33⅓&10%
Red Dev'l.....33⅓&10%
Bonney V. & T. Co.....40&10%

GLUE POTS.

Tinned..... .....30%
Enameled..... .....35%

GLUE.

Martin's Liquid, List....33⅓% off List
Martin's Liquid, List....33⅓% off List
Martin's Liquid, List....33⅓% off List

GREASE, AXLE.

Fraser's.....Ne
Baum's Castorine.....Net

GRINDSTONE FIXTURES.

Stowell's..... Net
Reading Hardware Co.....Net

HAMMERS.

"Artisan's Choice," A. E. Nail.40&10%
Engineer's and B. S. Hand.....60%
Machinist's Hammers..50&10&5%to60%
Bell Face, A. E. Nail.....50
S. & H. Cos. No. 20 ....per gross. 5 25

HANDLES—IRON, WROUGHT OR CAST—DOOR OR THUMB.

No. 0.....per doz $0 90 } Discs
No. 1..... " 1 00
No. 2..... " 1 18
No. 3..... " 1 35
No. 4..... " 1 50
Bronze iron drop lat., per doz net $1 10
Japanned store door.....net 1 10
Barn door No. 5..... " 1 35
Chest and lift.....dis 50
Wood—
Saw and plane..... " 45
Hammer, hatchet, axe, etc.... " 45
Brad awl.....per gro. 45
Hickory firmer chisel..... } 25
Apple firmer chisel.....
Socket firmer chisel.....
Socket framing chisel,.....
File.....per gro. $2 80
Auger, assorted..... 5 00
Hoe, rake, shovel, etc..... 50
Cross Cut Saw—
Atkins' No. 1.....per pair 28
" No. 3..... " 18
" No. 6..... " 12
Triumph..... " 12
Common loop..... " 10

HANGERS.

Chicago Spring Butt Co.:
Friction.....25%
Oscillating 25%
Big Twin.....25%
Cronk Hanger Co.:
Loose Axle..... .....60%
Roller Bearing.....60&10%
Lane Bros.:
Parlor, Ball Bearing $4.00
Parlor, Standard 3.25
Parlor, New Model 2.75
Parlor, New Champion..... 2.40
Barn Door, Standard .....60&10%
Covered .....50&10&10&5%
Special .....60&10%

Lawrence Bros.:
Advance.....60%
Cleveland .....60&10%
Crown.....60%
New York.....60%
Peerless .....60&10%
Sterling 60%
McKinney Mfg. Co.:
No. 2, Standard, $13.....60&10%
No. 1, Special, $13.....60&10%
Stowell Mfg. and Foundry Co.:
Acme Parlor Ball Bearing 40%
Atlas.....50&10%
Badger Barn Door.....50%
Baggage Car Door.....50%
Climax Anti-Friction.....50%
Elevator 40%
Express.....50%
Interstate .....50&10%
Lundy Parlor Door.....50%
Matchless.....50&10%
Nansen.....60&10%
Stowell Parlor Door 50%
Railroad 50%
Street Car Door.....50%
Steel, Nos. 300, 404, 500.....40&15%
Wild West.....50%
Zenith for Wood Track 50%
Taylor & Boggis Foundry Co.:
Kidder's .....50@50&10%
Wilcox Mfg. Co:
Bike Roller Bearing .....60&10%
C. J. Roller Bearing.....60&10%
Cycle Ball Bearing.....50%
Dwarf Ball Bearing.....40%
Ives, Wood Track.....60&10%
L. T Roller Bearing.....60&10&5%
New Era Roller Bearing .....50&10%
O. K. Roller Bearing.....60&10&5%
Prindle, Wood Track 60%
Richards' Wood Track 60%
Richards' Steel Track .....50&10%
Spencer Roller Bearing.....60&10%
Tandems, Nos. 1 and 2.....60%
Underwriters' Roller Bearing....40%
Wilcox Auditorium Ball Bearing 20%
Wilcox Barn Trolley No. 123 ....40%
Wilcox Fire Trolley, Roller Bearing 30%
Wilcox Le Roy Noiseless Ball Bearing 40%
Wilcox New Century ....50&10&10%
Wilcox Trolley Ball Bearing.....40%

HATCHETS.

American Axe and Tool Co..... } 40&10%to40&10 &5%
Blood's.....
Hunt's.....
Hurd's.....
Mann's.....
Underhill's.....
C. Hammond & Son..
Fayette R. Plumb....

HAY AND STRAW KNIVES.

Lightning.....$6 50&$7 00

HINGES.

BLIND AND SHUTTER.

Surface Gravity Locking Blind:
(Victor; National; 1868 O.P.; Niagara; Clark's O. P.; Clark's Tip; Buffalo.)
No.....1 3 5
Doz pair.....$0.75 1.45 2.90
Mortise Shutter:
(L. & P., O. S., Dixie, &c.)
No.....1 1½ 2 2½
Doz. pair.....$0.60 55 52 45
Mortise Reversible Shutter, (Buffalo, &c.)
No.....1 1½ 2
Doz. pair.....$0.65 .60 .55
Parker.....70@75%
North's Automatic Blind Fixtures, No 2, for Wood $9.00; No. 3, for Brick $11.50.....10%
Reading's Gravity.....75&10%
Sargent's, No. 1, 3, 5.....66⅔&10%
Sargent's, Nos. 11 & 13.....70&10%
Wrightsvile H'dware Co.:
O. S., Lull & Porter.....80&2½%
Acme, Lull & Porter.....75&10%
Queen City Reversible.....75&10%
Stenger's Positive Locking, Nos 1 & 3.....70&10&5%
Shepard's Noiseless, Nos. 60, 65, 55 79&10%
Niagara, Gravity Locking, Nos. 1, 3 & 5.....75&7½%
1868, Old Pat'n. Nos. 1, 3 & 5 75&7½%
Tip Pat'n, Nos. 1, 3 & 5.....75&7½%
Buff. Gravity Lock., 1, 3, 5..75&7½%
Shepard'r Double Locking, Nos. 20 & 25.....70&10%
Champion Gravity Locking, No 75 75&7½%
Steamboat Gravity Locking, No 10 5&7½%
Pioneer, Nos 060, 45 & 5½..75&7½%
Empire, Nos 101 & 103.....70&7½%
W. H. Co's Mortise Gravity Locking No. 2.....60&10%
Stanley's Steel GravityBlind Hinges, per doz. sets $1.30.....30&10%

GATE.

Clark's or Shepard's—Doz. sets:
No.....1 2
Hinges withLatches$1.90 2.50

Hinges only..... 1.30 1.90 2.90
Latches only..... 65 65 95
New England:
With Latch.....doz....@$1.55
Without Latch.....doz....@$1.25
Reversible Self-Closing:
With Latch.....doz....@$1.80
Without Latch.....doz ...@$1.45
Western:
With Latch.....doz. $1.40@1.75
Without Latch.....doz. $0.95@1.30
Wrightsville H'dware Co.:
Shepard's or Clark's Nos. 1 & 2... 65&2½%
Shepard's or Clark's, No. 3....55&5%

SPRING

Holdback, Cast Iron, gros. $8.00@8.25
Non-Holdback, Cast Iron.... ... gro. $6.75@7.25
Extra 10% often given on most of these hinges.
J. Bardsley:
Bardsley's Patent Checking.....15%
Bommer Bros.:
Bommer Spring Hinges 40%
Bommer Ball Bear. Floor Hinges.40%
Chicago Spring Butt Co.:
Chicago.....20%
Floor Hinge.....40%
Garden City Engine House.....20%
Keene's Saloon Door 20%
Triple End.....40c
Hoffman Hinge & Foundry Co.:
No. 70 & 80 Holdback Detachable $8.50
Lawson Mfg. Co.:
Matchless.....30%
Matchles Pivot.....35%
Payson Mfg. Co.:
Oblique.....50&10%
Stover Mfg. Co.:
Ideal, No. 18, Detachable, per gr. $12.50
Ideal, No. 4.....per gr. $9.00
New Idea No. 1.....per gr. $9.00
New Idea, Double Acting.....45%

WROUGHT IRON

Strapand T Hinges, list Mar. 15, 1901:
Light Strap Hinges.....75%
Heavy Strap Hinges.....80%
Light T Hinges.....70%
Heavy T Hinges.....66⅔%
Extra Heavy Hinges.....75&10%
Hinge Hasps.....60%
Cor, Heavy Strap.....80%
Cor. Ex. Heavy T.....75&10%
Screw Hook and Strap:
6 to 12 in.....lb. 3¼c
14 to 20 in.....lb. 3¼c
22 to 36 in.....lb. 3 c
Screw Hook and Eye:
¾ to 1 inch.....lb. 5c
½-inch.....lb. 6c
⅜-inch.....lb. 7c

MISCELLANEOUS—

Hoffman's Steel Spring Butt Hinges 40&10%
Hoffman's Offset Refrigerator Hinges 40&10%

HOLLOWWARE.

Stove Hollowware Ground.....50%
Maslin Kettles.....70&10%

HOOKS.

Picture, No. 299 .....&28c

BUSH HOOK.

No. 1, Underhill $9 00
Bird cage 40%
Clothes line .....60&10&10%
Grapling.....50%
Ceiling.....60&5%
Coat and Hat .....60&5%
Harness .....60&10&10%

WROUGHT IRON.

Cotton, V. & B.....25%
Tassel and picture.....50%
Wire, Coat and Hat, Gem.....net
Indestructible.....45%
Brass .....net $2 00%
Hooks and eyes, bright wire....80&10%
Brass.....60&10&5
Fish hooks, American.....50%

HOSE—RUBBER.

Competition.....dis 70&10%
Standard 70%
Extra 60%
N. Y. Rubber Co.'s st'd.....50&10%
Banner.....60%
Extra.....50%

IRONS—SAD AND POLISHING.

Mrs. Potts' No. 50.....70c
Mrs. Potts' No. 55.....70c
Mrs. Potts' No. 60.....90c
Mrs. Potts' No. 65.....85c

KNIVES.

Standard List.....70&5%
Adjustable Handle.....25@33⅓%
Watrous.....30&10@40%
Cantelo's Folding.....25%
Improved Crown.....20%

KNOBS.

Base, 2½in. Birch Rubber tip ♥ gro.....$1 40
Door, Mineral.....♥ doz. 65c
Door, Por. Jap'd.....♥ doz. 75c

LADLES.

Reading.....Net
Sargent's.....Net

LANTERNS—TUBULAR.

No. 0 Berger's "Ball Lift," per doz. $9 50.....40&10%
No. 0, Berger's "Ball Lift," Galvanized, per doz. $10 50...40&10%
No. 2 Berger's "Ball Lift," per doz. $13 00.....40&10%
No. 2 Berger's "Cold Blast," per doz. $16 00.....40&10%
No. 0 Berger's Dash Board, Japaned, Plain Globe, per doz. $13 00.....40&10%
No. 0, Berger's Dash Board, Japanned, Bull's Eye, per doz. $13 50.....40&10%
No. 2, Berger's Dash Board, Japanned, Plain Globe, per doz. $17 00.....40&10%
No. 2, Berger's Dash Board, Japanned, Bull's Eye, per doz. $17 50.....40&10%

BULL'S EYE POLICE.

2¾-in. flash light, per doz. $3 50@$3 75
3-in. flash light, per doz....4 00@ 4 25
4¾-in. regular, per doz.....3 50
3-in. regular, per doz.....3 57

LEMON SQUEEZERS.

Wood, Common, per gr., No. 0 $5 00; No. 1 $6 50; No. 2 $10 00.

Wood, Porcelain lined, No. 1.....per doz. $3 00@$3 50
Tinned Iron.....per doz. 1 25
Iron, Porcelain Lined, per doz.....3 25@ 3 50
Jenning's Star...per doz. 1 85@ 1 90
King.....per doz.

LOCKS.

Plate 33⅓%
Slaymaker-Barry Co.....30&35%
Sargent & Co.....40, 40&10%
Yale flat key.....net
L. & C, round key.....30&10%
Reading Harding Co.....40%
L. & C. flat key latches .....33&10%
Stearns' sliding door....net $15 00

CABINET.

Eagle.....33⅓%
Yale.....33⅓%
Eagle and Corbin trunk.....25%

PADLOCKS.

Wilcock's.....70%
M. W. & Co.....70%
Russell & Irwin 70%
Slaymaker Barry Co.....40%
Bohannon's brass.....80%
Yale.....net
Eagle 33⅓%
Eureka, Eagle Lock Co 40%
Corbin.....33⅓&10%

MALLETS.

Fiber Head Sterns.....30&10%
Hickory.....40%
Lignumvitæ .....40&40&10%
Tinners', Hickory and Applewood, per doz. .....75c@$1 50

MATTOCKS.

Regular list.....65&5%

MOWERS, LAWN.

Cheap.....all sizes.....2 25
Good.....all sizes, $2 50@$2 75
10 12 14 16-in
High Grade....4.25 4.50 4.75 5.00
Pennsylvania and Continental .....Net price
Genuine Philadelphia Mowers:
Styles M. S., C., K., T., N....70&10%
Style A, (all steel).....60&10%
Style E, Low Wheel.....60&10%
Style E., High Wheel.....70&10&5%
Drexel .....Net prices
Gold Coins. .....Net prices
Dewey's.....Net prices
All Day .....Net prices
XX, 12-in. wheel.....60%
Clippers.....50&10&10%

NAIL SETS.

Octagon..... per gross, $8 00@$9 00
Round..... per gross, 8 00@ 9 00
Cannon's Diamond Point, per gross .....$9 00 Net

NUT CRACKERS.

Sargent's No. 12.....$1 50

OILERS.

Tin or Steel.....50%
Zinc.....50&10%
Malleable Hammers 35%
Malleable Hammers, old pat., same list .....Net

PADLOCKS.

Sargent Dog Collar 70%
Sargent Wrought Steel and Brass..80%

PINCHERS.

Carpenters', wrt. iron, pol. steel jaws..... 25
Blacksmiths',..... 40
P. S. & W..... 25

PIPE.

WROUGHT.

List February, 1898.
1¼ and under, plain.....50&2½
1¼ and under, gal.....50&2½
1½ and over, plain.....50&2½
1½ and over, gal.....50&2½
Boiler tubes.....50&2½

PLANES.

Stanley Planes, No. 100.....$.15 each
" " No. 130..... .35 each

PLIERS AND NIPPERS.

Swedish Side Cutting Pliers 40%
" End " " 40%
" Diagonal " " 40%
Halls Compound Nippers.....40%
U. D. F. & T. Co., all kinds.....Net

PLUMBS AND LEVELS.

Common.....75 to 75&5%
Disston's.....70%

POACHERS.

Buffalo Steam Egg No. 1, per doz. $7 20. 50%

POLISH.

POLISH—METAL.

U. S. Metal Polish Paste, 3 oz. boxes, per dozen, 50c; per gr. $4.50; ½lb boxes, per doz. $1.25; 1 lb boxes, per doz.....$ 2 25
U. S. Liquid, 3 oz. cans, per doz. $1.25; per gr..... 12 00
Barkeepers' Friend Metal Polish, per doz, $1.75, per gr..... 18 00
Universal Paste, 3 oz. boxes.....60%
Burnishine Liquid 5 lb..... 16 00

POLISH—STOVE.

Dixon's .....per gross, $5 75
Dixon's Plumbago.....per lb 6½c

POPPERS, CORN.

Round or Square, 1 qt....per doz., 65%
Square, 1½ qt.....per doz., $1 00
Square, 2 qt.....per doz., 1 00

POST HOLE AUGERS AND DIGGERS.

Iwan's Patent Post Hole Auger....40%
Eureka Perfection Post Hole Digger, per doz.....$10 00
Atlas, per doz..... .... 8 25

POWDER.

IN CANISTERS.

Duck, 1 lb each.....45c
Fine Sporting, 1 lb each.....75c
Rifle, 1 lb each..... ....$1 00

IN KEGS.

Duck, 6¼ lb kegs.....$2 50
Rifle, 6¼ lb kegs..... ..... 1 25
Rifle, 12½ lb kegs..... 2 25
Rifle, 25 lb kegs 4 00

PRESSES—FRUIT AND JELLY

Enterprise Manufacturing Co.....25%

PULLEYS.

Hay Fork, Svl, Sd Eye, doz $1 75@$2 75
Hot House, Awning, etc.....50%
Japanned Clothes Line.....50%
Japanned Screw.....50&10%
Japanned Side..... .....50&10%
Sash (Auger Mortise):
Common Sense, 1½ in ..per doz. 19c
Common Sense, 2 in ... per doz. 20c
Empire.... ....17c.; 2 in., 22c

SASH PULLEYS.

Fox No. 8 or No. 7, 2¼ wheel, ...25c per doz
Fox No. 9, 1¾ wheel.....20c per doz
Extra for plated Finish... 25c per doz
Extra for Anti-Friction Bronze Bushing.....10c per doz

RAZORS.

Fox Razors No. 42....per doz. $20
" " " 44.... " " 24 00
" " " 82..Platina " 24 00
Discount 40%
Rantankarus..... " 0

REGISTERS.

List Sept. 1, 1901.

Black Japanned Registers, Ventilators, Faces and Borders, ...70%
White Japanned Registers, Ventilators and Faces.....70%
Bronzed Finishes in Imitation of Gold, Silver, Copper or Bronze .....40&10%
Nickelplated .....50&10%
Electro-Plated in Brass, Bronze, Copper or Oxidized Silver 40&10%
White Porcelain.....40&10%
Solid Brass and Bronze Metal .....40&10%
(All on new list.)

RIVETS AND BURRS.

Coppered Iron Rivets.....60&5%
Tinners Rivets.....60&5%

ROOFING SUPPLIES.

EAVE TROUGH.

"Perfection" Galvanized Eave Trough.....75&10%&10%
"Eclipse" Galvanized Eave Trough.....75&10%&10%
Double Bead Galvanized Slip Joint Eave Trough.....75&10%&10%
Double Bead Galvanized Lap Joint Eave Trough.....75&10%&10%

GUTTERS.

Roof Gutters, Galvanized. 75&10%&10%

PIPE.

Plain Round Pipe, Galvanized, Nested.....70-5%
Plain Round Pipe, Galvanized, Unnested.....70-5%

VALLEYS.

Valleys, in Rolls, IC and IX Terne. 70%
Valleys, in Sheets, IC and IX Terne.....70%

HOOKS.

Flashing Hooks.....10%
Wrought Conductor Hooks.....60%

CUT-OFFS.

Kuehn's Galv.....60%
Acme Galv.....10&10%
Acme Tin.....60&10%
Centennial Tin.....20%

EAVE TROUGH HANGERS.

Eave Trough Hangers, Single and Double Bead, Imperial.....15%
Eave Trough Hangers, Single and Double Bead, Wire.....20%

ELBOWS.

One Piece Conductor Elbows, Galvanized, Corrugated..... 60%
Adjustable Elbows, Tin. 50%

PREPARED ROOFINGS.

Imperial 2-ply Tarred Roofing complete.....$1 10 per sq.
Imperial 3-ply Tarred Roofing, complete.....$1 35 per sq.

ROPE.

Per lb
Manilla, 7-16 inch diameter and larger.....9¼@10c "
Manila, ⅜ in.....9¼@9¾c "
Manila, ¼ and 5-16 in..... 10¼@10¾c "
Sisal, 7-16 in. and larger 7@7¾c "
Sisal ⅜ inch .....8@8¼c "
Sisal, ¼ and 5-16 in.....8@8¼c "
Sisal, Medium Lath Yarn ... 9@9¼c "

SASH CORD.

Braided, Drab.....lb 25c
Braided, White, common.....lb 19c
Cable Laid Italian ....lb, A 18c, B 16c
Common India.....lb 9c@9½c
Cotton Sash Cord, twisted....12@16c
Patent Russia.....lb 12½@13c
Cable Laid Russia.....lb 13½@14c
India Hemp, braided.....lb 14@15c
India Hemp, twisted.....lb 10@12c
Patent India, twisted.....lb 10@12c
Pearl Braided, cotton .....lb 17@18c
Massachusetts, white.....lb 22½c
Massachusetts, drab.....lb 20½c
Eddystone Braided, cotton ....lb 19c
Harmony Cable Laid Italian....lb 18c
Ossawan Mills:
Crown, Solid Braided, white ..lb 18c
Braided, Giant, white.....lb 17c
Peerless:
Cable Laid Italian.....16c
Cable Laid Russian.....14c
Cable Laid India..... 12c
Braided India.....18c
Phœnix, white.....19c
Samson:
Braided, Drab Cotton .....lb 32½c
Braided Italian Hemp.....lb 32½c
Braided, Linen.....lb 49c
Braided, White Cotton, Spot.lb.28½c
Silver Lake:
A quality, Drab, 40c.....15%
A quality, White, 35c.....15%
B quality, Drab, 35c.....15%
B quality, White, 30c.....15%
Italian Hemp, 40c.....15%
Linen, 57½c.....15%

SASH LOCKS.

Ives, Patent.....60@40&5%
Harlew's Burglar-Proof Ventilating.....Net
Payson's Perfect.....Net
Payson's Signal (new list).....Net

SAWS.

Atkins' Circular.....Net
Atkins' Band.....Net
Atkins' Cross Cuts.....Net
Atkins' Mulay, Mill and Drag.....40%
Atkins' One-Man Saw.....Net
Atkins' Circular Solid and Inserted Tooth.....50%
Atkins' Bands over 2 in. wide.....60%
Atkins' Bands under 2 in. wide.57&10%
Atkins' Mill, Mulay and Drag.....50%
Atkins' Cross Cuts.....40%
Atkins' One Man.....40&10%
Atkins' Narrow Cross Cuts.....40%
Atkins' Wood Saws and Blades.40&10%
Atkins' Hand Saws.....40%
Atkins' Compass Saws.....50%
Atkins' Butcher Saws.....40&10%
Disston Circular Solid and Inserted Tooth.....50%
Disston Cross Cuts.....Net
Disston Narrow Cross Cuts.....Net
Disston, Mulay, Mill and Drag.....40%
Disston Framed Woodsaws.....35%
Disston Woodsaw Blades.....40%
Disston Woodsaw Rods.....25%
Disston Handsaws, Nos. 12, 99, 9, 16, D100, D8, 120, 76, 77, 8.....25%
Disston Hand Saws, Nos. 7, 8.....30%
Disston Compass, Keyhole, etc....25%
Disston Butcher Saws and Blades.35%

SAW FILERS

Stearns'.....25%
Silent saw.....25%
Sargent's.....60&20%
Reading.....37½%

SCALES.

Family, Turnbull's .....30@30&10%
Hatch, Counter:
Platform, 4 lb. by ½ oz..doz...$5.75
2 Platforms, 8 lb. by ½ oz. doz $16 00
Union Platform, Plain.....$1.75@$2.00
Union Platform, Striped..$1.85@$2 15
Chatillon's Eureka.....25%
Chattilon's Favorite.....40%
Chatillon's Grocers' Trip Scales ..50%
Pelouze Scales, Household Counter, Confect. Postal, Ice, &c.....50%
"The Standard" Portables.....45%
"The Standard" R. R. and Wagon 50%

SCREWS.

BENCH AND HAND.

Bench, Iron.....per doz. 60%
Bench, Wood, Beech..per doz. $3 50
Hand, Wood.....30%

COACH, LAG AND HAND RAIL.

Coach and Lag, Gimlet Point, list Sept. 20, 1899.....75@75&10%
Hand Rail, list Jan. 1, 1871.....75%

JACK SCREWS.

ack Screws.....70%

WOOD.

MANUFACTURERS' CIRCULAR PRICES

New List.
Flat Head Iron.....90%
Round and Oval Head Iron.....85%
Flat Head Brass.....85%
Round and Oval Head Brass.....82½%
Flat Head Japanned.....82½%

SCYTHES.

Blood's.....$ 5 50
Clover..... 5 50
Grain Clipper, Blood's..... 10 80
Hollow Clip..... 5 50
Silver Clip 5 50
Honest Dutchman..... 5 50

SHEARS.

	7	8	9 in.
Best.....	$16.00	$18.00	$20.00 gro.
Good.....	13.00	15.00	17.00 gro.
Cheap....	5.00	6.00	7.00 gro.

Straight Trimmers, &c.:
Best Quality Jap.....70@70&10%
" Nickel.....60@60&10%
Fair qual. Jap.....80@80&5%
" Nickel .....75@75&10%
Tailors' Shears.....40@40&10%
Acme Cast Shears.....40@40&5%
Heinisch's Tailors' Shears. 40@40&5%
Wilkinson's Hedge 50%
Wilkinson's Sheep.....1900 list, 50%

SHINGLES, METALLIC.

Eastlake I. C. Tin Shingles, painted, pr sq.....$4 25
Eastlake I. C. Tin Shingles, galvanized, pr square.....$6 00
Octagon Fluted I. C. Tin Shingles, painted, per square..$5 50
Octagon Fluted I. C. Tin Shingles, galvanized, pr sq....$7 25

SIFTERS.

Eclipse.....per gr $15 00
Hunter's Genuine.....per gr $16 00

SKATE SHARPENERS.

Skate Sharp., Eureka, per doz $2 00 net
Washer Cutters, Woodard's, per doz.....$2 50 net

SLATE.

GENUINE NO. 1 BANGOR.

24x14, 24x12, 12x 8	$3 50 pr sq.	20x10, 18x10, 18x 9, 16x 8	$4 50 pr sq
22x11, 20x12, 18x12, 16x12, 14x10, 14x 8, 14x 7	$3 75 per sq.	16x10, 16x 9	$4 25 pr sq
		12x 7, 12x 6	$3 25 pr sq

GENUINE NO. 1 BANGOR RIBBON.

24x14, 24x12	$3 00 pr sq.	20x10, 18x10, 18x 9, 16x10, 16x 8	$3 50 pr sq
22x11, 20x12, 14x 8, 14x 7	$3 25 pr sq.		

SNAPS.

German.....40@40&10%
Covert Mfg. Co.:
Derby.....35&2%
High Grade .....45@2%
Jockey.....40&2%
Trojan .....45&2%
Yankee.....35&2%
Yankee, Roller.....30&2%
Covert's Saddlery Works:
Banner.....60&10%
Crown.....60&10%
Model .....60&10%
Triumph .....60&10%
W. & E. T. Fitch Co.:
Bristol .....40&10%
Empire.....50&5%
German 40%
National .....50&5%
Perfect.....45%
Clipper.....50&5%
Champion.....40%
Security.....40%
Victor.....60&5%
Oneida Community:
Solid Steel.....65@65&10%
Solid Swivel.....65&10@65&10&10%
Sargent's Patent Guarded...66⅔&10%

SOLDERING FURNACES.

No. 3 Gems tin reservoir.....$6 00
No. 6 Gems copper reservoir..... 8 50
Gem Gas Pots..... 3 25
Clayton & Lambert No. 1 Fire-Pot 6 00
Clayton & Lambert's Special Fire-Pot..... 4 50

SPRINGS, DOOR.

Star (Coil) list Oct. '95.....net
Torrey's Rod 39 in. Per doz. .....$1 20@$1 25
Warner's No, 1.....net 75

SQUARES.

Steel and iron.....70&10%
Nickel plated.....70&10%
Try squares and bevels.....60&10%
Disston's.....70%
Bemis and Call, pocket.....30%
Winterbottom's try & mitre.....30%
Starrett's.....25%

STAPLES.

Barbed Blind .....per lb., 10c
Poultry Netting.....per lb., 5c

STAPLE PULLERS.

Russell Staple Pullers..per doz., $9 00

STOVE PUTTY.

1, 10 & 25 pound Cans.....per lb., 5c
500 pound Kegs.....per lb., 4½c

STROPS.

RAZOR.

Emerson.....60 to 60&5%
Imitation.....20, 10&5%
Torrey's.....20%
Tower & Lamont.....per doz $4 00
04 Combination.....per doz 3 75

TACKS.

List Jan. 15, '99.
Carpet Tacks, American.....90&10%
American Cut Tacks.....90&10%
Swedes Iron Tacks.....90&20%
Swedes Upholsterers' Tacks.....90&20%
Gimp Tacks .....90&20%
Lace Tacks .....90&20%
Trimmers' Tacks.....90&20%
Looking Glass Tacks .....70&10%
Bill Posters' and Railroad Tack90&10%
Hungarian Nails.....80%
Common and Patent Brads....80&10%
Trunk and Clout Nails.....75&10%

TRAPS.

GAME.

Oneida Pattern .....75&5@75&10&5%
Newhouse .....45@50%
Hawley & Norton.....65@5&70%
Victor (Oneida Pattern) ...75@75&10%
Star (Blake Pattern) ....65&10@70&5%

MOUSE AND RAT.

Mouse, Wood, Choker, doz. holes 10c
Mouse, Round or Square Wire, doz.....$0.85@1.00
American Pattern French Rat and Mouse Traps—
No. 1, Detroit Marty Pattern, per doz. $4.50; in ½ gro. lots, per doz $4.00
No. 2, Detroit Marty Pattern, per doz, $3.25; in ½ gro. lots, per doz.....$3.00
Detroit Marty Pattern Mouse, per doz. $2.00; in ½ gro. lots, per doz.....$1.75
Diamond Joe Mouse Traps, per doz.....60c
Diamond Joe Rat Traps, per doz.$1.00
Marty French Rat and Mouse Traps (Genuine:)

TWINE.

Flax Twine—	BC	B
No. 9, ¼ and ½ lb. Balls...	20c	24c
No, 12, ¼ and ½ lb. Balls ...	17c	20c
No, 18, ¼ and ½ lb. Balls ...	14c	17c
No. 24, ¼ and ½ lb. Balls....	14c	17c
No. 36, ¼ and ½ lb. Balls...	13c	16c

Chalk Line, Cotton, ½ lb. Balls18@20c
Cotton Wrap., 5 lb. Balls to lb 16 to 20c
2-Ply Hemp, 1½ lb. Balls (Spring Twine) .....12@15c
2-Ply Hemp, 1 lb. Balls.....12@15c
3-Ply Hemp, 1½ lb. Balls .....
2, 3, 4 and 5-Ply Jute, ½ lb. Balls....8c
Mason Line Linen, ½ lb. Balls 45c
No. 264 Mattress, ¼ and ½ lb. Balls 24c
Wool.....5¼@6c

VISES.

Solid boxes.....40%
Parker's.....20%
Howard's.....25%
Bonney's.....35%
Trenton.....40%
Stearns'.....50%
Cheney's.....12½%
Massey's.....25%
Parallel.....30&5%
Holland's.....35%
Stevens'.....25%
Miller's Falls.....40%
Prentiss.....20%
No. 1, Rat each $1.12½; per doz. $12.00
No. 3, Rat, per doz. $6.00; case of 50.....$5.25 doz.
No. 3½, Rat, per doz $4.75; case of 72.....$4.25 doz.
No. 4, Mouse, per doz. $3.50; case of 72.....$2.75 doz
No. 5, Mouse, per doz. $2.75, case of 72.....$2.25 doz.
Schuyler's Rat Killer, No. 1, per gro. $30.00; No. 2, per gro. $30.00; Mouse, No. 3, $18.00.....50%

FLY.

Balloon, Globe or Acme..... doz. $1.15@1.25; gro. ... $10.50@11.00
Harper, Champion or Paragon.... doz. $1.25@1.40; gro....$12.00@12.50

TROWELS.

Disston Brick and Pointing 30%
Disston Plastering.....25%
Disston "Standard Brand" and Garden Trowels.....40%
Never-Break Steel Garden Trowels.....gro. $7.00
Peace's Plastering.....30%
Rose Brick and Plastering.....25&5%
Woodrough & McParlin Pl'st'ring.

WASHERS.

LEATHER, AXLE—

Solid.....80&10&10@85%
Patent.....85&10@85&20%
Coil: ⅞ 18c, 1 19c, 1⅛ 20c, 1¼ inch. 23c per 100

IRON OR STEEL.

Size bolt 5-16 ⅜ ½ ⅝ ¾
Washers $5.20 $4 20 $3.00 $2.80 $2.60
In lots less than one keg add ¼c per lb; 5-lb boxes add ⅛c to list.

CAST WASHERS.

Over ¼ inch, barrel lots per lb .....1⅛@1¼c

WELL WHEELS.

8-in., $2.20.....10-in., $2.60
12-in., $3.25.....14-in., $3.25

WIRE AND WIRE GOODS.

Brt. and Ann., 6 to 9, 70&10@70&10&5%
Brt. and Ann., 10 to 18, 72½@72½&10%
Brt. and Ann., 19 to 26, 75&7½@75&10%
Brt. and Ann., 27 to 36.....75&10&5@75&10&7½%
Cop'd and Galv., 6 to 9, ...70@70&10%
Cop'd and Galv., 10 to 18.....70&10@70&10&5%
Cop'd and Galv., 19 to 26.....75&7½@75&10%
Cop'd and Galv., 27 to 36.....75&10@75&10&5%
Tinned, 6 to 14.....75@75&5%
Tinned, 15 to 18 .....70&5@70&10%
Tinned. 19 to 26.....70@70&5%
Tinned, 27 to 36.....65&10@70%
Annealed Wire on Spools.....70&5@70&10%
Brass and Copper Wire on Spools.....60&5@60&10%
Brass, list Feb. 26, '96.....25%
Copper, list Feb. 26, '96.....15%
Cast Steel Wire.....50%
Stubs' Steel Wire, $6.00 to £.....40%

BRIGHT WIRE GOODS.

List April 1, 1901.....85&20 to 85%

WIRE CLOTH AND NETTING.

Galvanized Wire Netting.....80&10%
Ptd Screen Cloth per 100 ft.....$1.20
Light Hardware Grade:
2-8 Mesh. Plain (8c list) sq ft... 1½c
2-8 Mesh. Galv. (8c list) sq ft ...2½c

WRENCHES.

Agricultural.....70&10%
Case lots.....75&10%
Acme.....60&5%
Baxter's S.....60&10%
Bull Dog.....70%
Coe's Genuine.....40&10&5%
Coe's "Mechanic's"..40&10&10&5&5%
Alligator.....60&10&10%
Bemis & Call's:
Adjustable S.....35&5%
Adjustable S Pipe.....40%
Briggs' Pattern.....30&10%
Combination Black.....40&5%
Combination Bright.....40%
Cylinder or Gas Pipe.....55%
Extra Heavy.....45%
Merrick's Pattern.....50%
No. 2 Pipe, Bright.....55%
Bindley Automatic.....30%
Boardman's.....33⅓%
Donohue's Engineer.....40&10%
Eagle.....50&10%
Gem Pocket.....30%
Hercules.....70%
Knife Handle, Machinists' (W & B.): 0&10%
Case lots.....30&5%
Less than case lots.....0%
Improved Pipe (W. & B.).....30&10
lid Handles, P. S. & W.....&10 &
Sovesenson.....

Wants and Sales.

For yearly subscribers to THE AMERICAN ARTISAN will be inserted under this head advertisements of six lines WITHOUT CHARGE, for employers wishing to secure employes, persons seeking situations, parties desiring to purchase a business, businesses for sale, partners wanted, to exchange, etc. Those who respond to these announcements will please mention that they read the advertisement in THE AMERICAN ARTISAN.

BUSINESS CHANCES.

PATENTS HUBERT E. PECK, 623 F St., N. W. Washington, D. C. Consulting Expert in Patent Causes, U.S. and Foreign Patents. Send for leaflet on "Rejected Patent Applications." Honest work but no "Something for Nothing" offers.

For Sale—Clean and up-to-date stock of hardware and implements. In one of the best county seat towns in south-eastern South Dakota. Population 1500. Gas light, waterworks, telephone system, good schools, etc. Stock will invoice about $4,500. Will sell with or without building. This will bear investigating. Best of reasons for selling. Address "637," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 26

For Sale—Clean stock of hardware. In thriving city of over 30 000 inhabitants. A lake port where there is a large amount of labor employed at good wages. One concern paying for labor over ten thousand a week. But little competition. Three other hardware stores, and all agreeable to make money. Reason for selling, old age and wish to retire. Would take a young man that is a tinner as partner that had a prospect of buying entire stock in a few years. Stock invoice seven to eight thousand dollars. Address "Sale Business," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 26

I Have 140 acres improved land in Wayne Co., Ill, 10 acres orchard, 25 acres fine, unculled timber, 20 acres pasture, 52 acres meadow, 25 acres corn land and 8 acres yard, barn-yard, truck patch, etc., fair frame house and good barn. Incumbrance $1,500, can run ten years @ 6% if desired. Price $45.00 per acre. Will exchange equity for good, clean stock of hardware. F. A. Clausen, Garrett, Illinois. 25

For Sale—A new, clean stock of hardware, stoves and tinware, in a good town of about 7,000 inhabitants; stock will invoice about $3,000. In Northern Illinois. Address "Stoves," care of THE AMERICAN ARTISAN, 69 Dearborn Street, Chicago, Ill. 25

For Sale—A leading general store, situated in one of the most prosperous farming districts in Iowa, desires to sell their stock of hardware and tinners' tools to ambitious, young or middle age man. Stock will invoice $2 000 We have a fine class of trade with exceptionally small losses from bad debts. This is a good opportunity for a German as half of the population in this county are of that nationality. Address "Good Thing," care of THE AMERICAN ARTISAN, 69 Dearborn Street, Chicago, Ill. 25

For Sale or Trade—Full or part, set of tinner's tools and machines, all in very fair condition. R. Z. Tracy, Irving Park Sta., Chicago, Ill. 24

For Sale—Tin shop, furnace and plumbing business; pumps and well supplies, fine room for storing stoves together with a 3 years' lease of the building, and rent cheap; only one in town of 1800—about 35 miles from Chicago, in Indiana. Good reason for selling, at a bargain. Address, Box 158, Hobart, Indiana. 24

For Sale—Hardware Stock and Building; (total value $10,000 00), in South Central Minn. Last year's sales $20,000.00. This is a big chance for your future; can reduce stock to suit. May consider a land trade for building. For further information address "Box In," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

Wanted Tinner . With $1,000.00, to buy half interest in an established business in Minneapolis, Minn. Address "Minneapolis," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

For Sale—A well established hardware stock; tinshop in connection. Well and wind mill fixtures, harness, machinery and buggies. In a thriving town in southern Wis. Has two good railways. Have to sell on account of poor health. A bargain if sold at once. "Locked Box 2," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

For Sale—Furniture and hardware stock. Located in town of 2,000 inhabitants. Doing a good business. R. R. division and county seat. Address "Box R. R.," care of THE AMERICAN ARTISAN 69 Dearborn St., Chicago, Ill. 24

For Sale—A well-established general hardware business; tin shop in connection Invoicing about $3,000. In southern Wisconsin. Will be sold at once. Address "Ajax," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 28

For Sale—A well-established hardware stock—doing a good business in one of the best towns in Iowa. Population 3,500. A neat and clean stock of about $4,000. A good location and a good trade. I have very good reasons for wanting to sell. Address "Box T. B. F.," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 23

TINNERS' TOOLS.

For Sale—Second-hand World cash register in good order. Write for price. Mann & Co., Pierson, Ia. 26

Wanted—A 2nd-hand pipe tapping machine. Send me prices and description. C. A. Bergh, Mondovi, Wis. 25

For Sale—One complete set tinner's tools, including 1 4 foot brake; all the tools that could be used in a first class shop. Address "Tools," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 25

Tinner's Tools for Sale—Complete set tools in first class condition; cheap for cash. Jay Commons, Aurora, Mo. 24

Wanted—Notching machine, for roofing tin, to notch two corners at a time. Geier & Peppler, 700 Lincoln Ave., Chicago, Ill. 23

For Sale—Tinner's tools. Price and list on application. Address W. C. H., Box 271, Darlington, Wis. 22

For Sale—Complete set of tinners' tools including square shears. For full information address W. A. Brouillet, Conrad, Ia. 21

HELP WANTED.

Wanted—Good house and sign painter and paper hanger. Must be sober and steady. State salary. Address Anton Popelar, Dodge, Neb. 26

Wanted—Competent man as superintendent of stove factory producing sheet steel and cast goods. Must be able to handle men and one who has good mechanical ideas. Address "Compete," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 26

Wanted—Experienced clerk for general hardware store in south-eastern South Dakota. Norwegian or German preferred. Give reference and state wages wanted. Address Box "Exc," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 26

Wanted—Good, sober, all-around tinner and plumber who can put up windmills and not afraid to work. Answer, stating wages expected. Newtson & Seaver, Hoopeston, Ill. 26

Wanted—Experienced and competent stove and range traveling salesman to sell the "Eclipse" line in Nebraska. Stock carried at Omaha. Address Eclipse Stove Co., Mansfield, O. 26

Wanted—Three or four first-class experienced furnace salesmen for the N. W. states; by an old established house. Address "Old Established," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 26

Good Tinner Wanted—One that understands plumbing, iron pipe, and has some knowledge of hot water and steam heating. Steady work for right man, must be a married man and sober. German preferred. Address "P. L.," care of THE AMERICAN ARTISAN, 69 Dearborn Street, Chicago, Ill. 25

Wanted—Experienced Stove Salesman for Northern Illinois. Send References; apply by letter. Bergstrom Bros. & Co., Neenah, Wis. 25

Wanted—By Jan. 1, 1902, a first class tinner and clerk; good, steady job at good wages; must be honest, sober, industrious; would like him to understand pumps and plumbing; give references and wages. Thos. Rawlings, Wakefield, Neb. 25

Wanted—Two Salesmen, one for Michigan and one for Southern Indiana. In your application state your age, reference, amount of business you wrote in 1900 and 1901 and salary asked. Enterprise Stove Co., Vincennes, Ind. 24

Wanted—Hardware salesmen acquainted with the trade in Illinois, Wisconsin, Iowa and Minnesota. Good salaries to the right men. Address Geo. W. Trout & Co., 174-176 Lake St., Chicago, Ill. 23

Wanted at Once—A first class tinner; a man who can do all kinds of inside and outside work; only strictly temperate tinners need apply. W. Reinhardt & Sons, Lincoln Ill. 23

January 1st, 1902, Wanted—A first class tinner at inside and outside work, hot air furnace, steam and hot water, some plumbing and wind mill work; wages $12.00 per week the year around; must be honest, sober and industrious; with some knowledge of hardware. Apply with references. Address "H," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 23

Wanted—Three men, under 30 years of age, to act as state manager for states of Iowa, Missouri, Kansas and Oklahoma. With the best line in the world. Promotion for him if he is ambitious and will work for money. Enclose references. State what has been your occupation for the past five years. Address Thomas McLaughlin Co., Milwaukee, Wis. 23

Wanted—A good, honest, sober tinner and furnace man, one that can do plumbing and hot water heating; must know how to make handmade pieced milk cans. A steady job the year around, and good wages to one who can do my work. Those that spend all they can earn in the saloons need not apply. Address "Tinner and Plumber," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 22

Wanted—A first class stove pattern fitter. Moser, Wehrle & Co., Newark, Ohio. 24

Wanted—For the coming year, a tinner and hardware clerk. Steady job for the right man. Bradberrey Bros., Hurley, So. Dak. 24

Wanted—A leading western furnace house desires to engage a first class furnace salesman. Must be man of experience, who can earn top-notch salary. Address "H. R.," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

Wanted—An experienced sheet metal stamper for stamping sheet metal ornaments. Must be a hustler and able to make his own dies. Steady work for the right man. Give age, experience and wages expected. Address Gerock Bros. Mfg. Co., 1252 Manchester Ave., St. Louis, Mo. 24

Wanted—A general purpose retail hardware clerk. Must be honest, sober and willing to work. A man who has some knowledge of tin work preferred. Address with full particulars and amount of salary wanted, Address A. H. Burkert, Gosport, Ind. 24

SITUATIONS WANTED.

Situation Wanted—By a reliable young tinner with 12 years' experience at tinning and plumbing. Can plan and put up furnaces. First-class mechanic. Situation wanted west of Mississippi river. A. B. Curtis, care of Gen. Del., Sioux City, Ia. 26

Wanted—Position in hardware store. 5 years' experience; 2 years in tin shop. Prefer small town. Any part of country. Address J. O. Harney, Lawton, O. T. 26

Wanted—A position with a retail hardware and implement house at once. Have had 15 years' experience in the local trade and on the road. Can do tin work, pump work and some plumbing. Am honest, industrious and a No. 1 salesman. Address "M. O.," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 26

Wanted—By young married man, position in retail hardware; capable of taking entire charge, experience, best references. Address, H. T. Cornell, care C. W. Hackett Hardware Co., St. Paul, Minn. 25

Wanted—A position as traveling salesman with a leading stove house, either city or country. Have a high record and wide acquaintance in city and suburbs. Understand gasoline and oil stoves thoroughly. A-1 references. Address "Energetic Man," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 25

Wanted—A man of 18 years' experience in the hardware line, desires a position either as travelling salesman or manufacturers' agent for a general line of stoves and furnaces, or a general line of hardware. Would like to sell on commission in Mich.; thoroughly reliable and can furnish best of references. Address K., 420 McCullum St., Bay City, Mich. 25

Situation Wanted—If you need an A 1 Tinner fully capable of taking charge of good tin shop furnaces and cornices, write me; I can fill the bill Chicago or Northern Illinois preferred. Address "The Hustler" care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

Wanted—A position to travel in Illinois, by an experienced stove salesman; can command trade. Address "Box 3 L.," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

Situation Wanted—By a first-class tinner and furnace man; also have a fair knowledge of plumbing. References given. Address E. C. Bond, Abingdon, Ill. 24

Position Wanted—As tinner; have had plenty of experience at the trade in all its branches. Address "P. S.," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

Situation Wanted—By experienced plumber, heater and tinner; can plan and estimate; strictly sober and industrious, am married and want a steady job. Address "Box J.," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

Wanted—A good specialty, or a line of hardware, cutlery or stoves, to sell the trade from sample, on commission. Address "Hawkeye," care of THE AMERICAN ARTISAN, 69 Dearborn Street, Chicago, Ill. 24

LB Ap '04

Young tinner, 8 years' experience in general job and furnace work, wants steady job; married, sober, and not afraid of work. References. Address, S. H., Box No. 279, Hartford, S. D. 23

Situation Wanted—A salesman and estimator of heating and ventilating work, with experience in leading Chicago offices, desires situation. Best of references. Address "Leading," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 23

Wanted—Situation as clerk in hardware store by experienced and trustworthy man, capable of taking care of city or country stock. Can help in tin shop. Best of references. Address, Box 263, Madrid, Boone County, Ia. 23

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Rare opportunity to purchase a profitable wholesale and retail hardware business; established twenty years; doing over $200,000 yearly. Reason for selling, ill health. This is positively the finest proposition ever offered in the West.

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Perry Hardware Co.'s stock of hardware, tinners' tools, and fixtures; will invoice about $4,000; will be sold cheap for cash. Wish to sell out at once as I am going to Texas; call on or write to

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By a first class heating engineer as hot water and furnace salesman, with a large trade established in Eastern Ohio and Western Pennsylvania, especially in Pittsburg and vicinity, with the very best first class references. Open for same Jan. 1st, 1902. Address "C. A.," in care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 24

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Stove and Furnace Salesmen for Illinois, Iowa, Wisconsin, Minnesota and the Dakotas by an established concern.

Only experienced men with good references need apply.

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MONTAGUE COHEN
39 PARADISE ST., LIVERPOOL, ENGLAND

Can accept the agency for a few lines of American manufacture in British Isles and Continental Europe. Will give prompt attention to same. Can furnish references. 16

Wanted.

Experienced Heating Expert to manage the Hot Water Heater Department of a well established concern making stoves and heaters.

Only practical, competent man wanted who can furnish good references.

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Apply by letter only. Give age, experience, salary expected and references. Please do not apply unless you have had actual experience on the road in selling the trade.

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WANTED.

T.nners to increase their means by soliciting subscriptions for THE AMERICAN ARTISAN. Liberal commission. Write for particulars to THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 23

Wanted.

Man who has experience in handling gas range business to manage this department for a well equipped stove foundry.

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Write:

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Best Hanger Ever Invented.

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The hanger can be tightened as desired by giving the eye a twist. For 2-inch corrugated pipe 2⅜ inch hanger is required. Other pipe runs uniform.

Also Manufacturers of Iwan's Chimney Top.

Write for Discounts.

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STORE LAMP. Patented.

Burns 12 to 15 hours with one filling. Diffuses more light than any electric arc. Does not affect your insurance policy. Permitted by all insurance companies. Absolutely non-explosive, odorless and smokeless. Tried, tested and used commercially for three years. Over 25,000 in practical use. One satisfied customer says:

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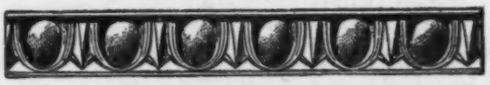

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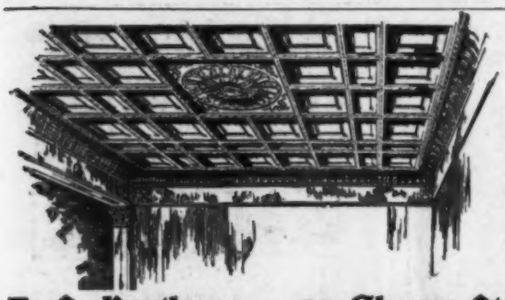

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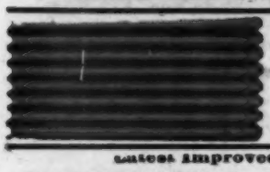

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[Treadle or lever combined] or Belt Power for light or heavy work, all sizes for squaring, trimming and slitting, also cutting triangular or square holes, 8 different styles.

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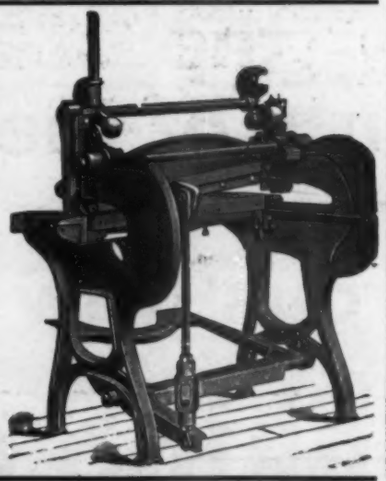

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Is beyond all doubt the best book published on practical house-heating.

It contains the plans and essays on heating a house submitted in THE AMERICAN ARTISAN House Warming Competition for $300.-00 prizes, and is in fact

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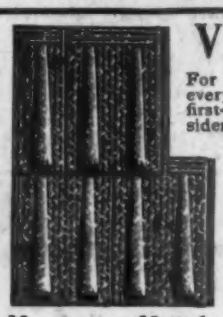

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The strongest, most durable and cheapest CUT-OFF on the market.
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is made very strong and has a lever that cannot get out of order. **It will fit corrugated** pipe. There is a distinct saving of both labor and solder in applying it to the pipe.

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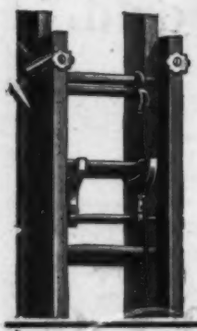

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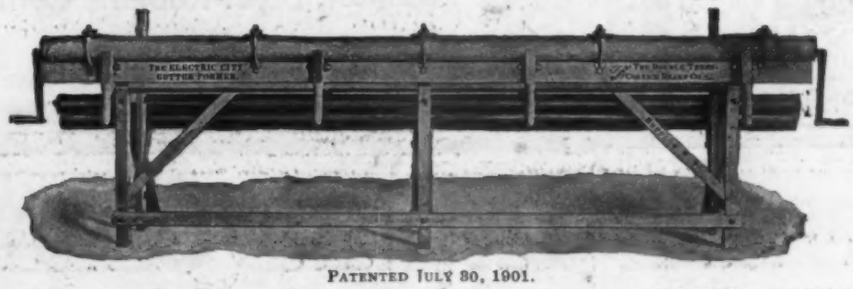

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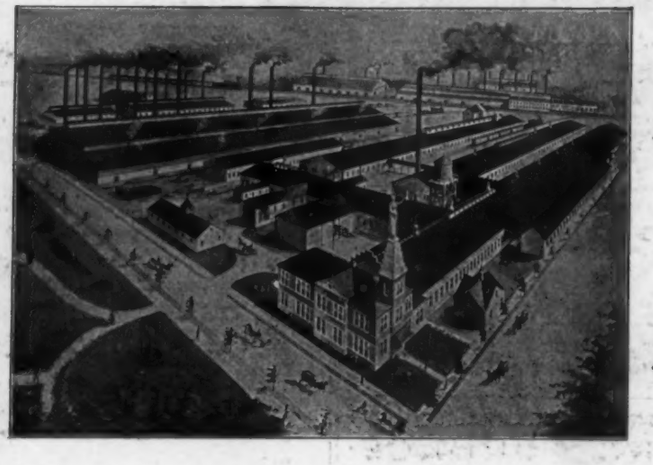

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Stove Polish is the blackest and best.

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4.—This washer is made by **experienced mechanics**, and will outlast any other washer on the market.
5.—The tub has a wringer box fastened with steel brackets.
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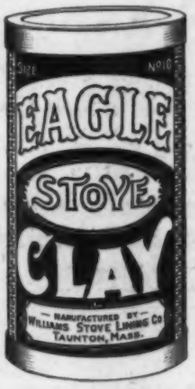

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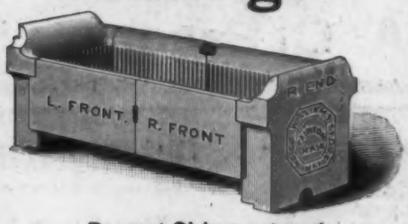

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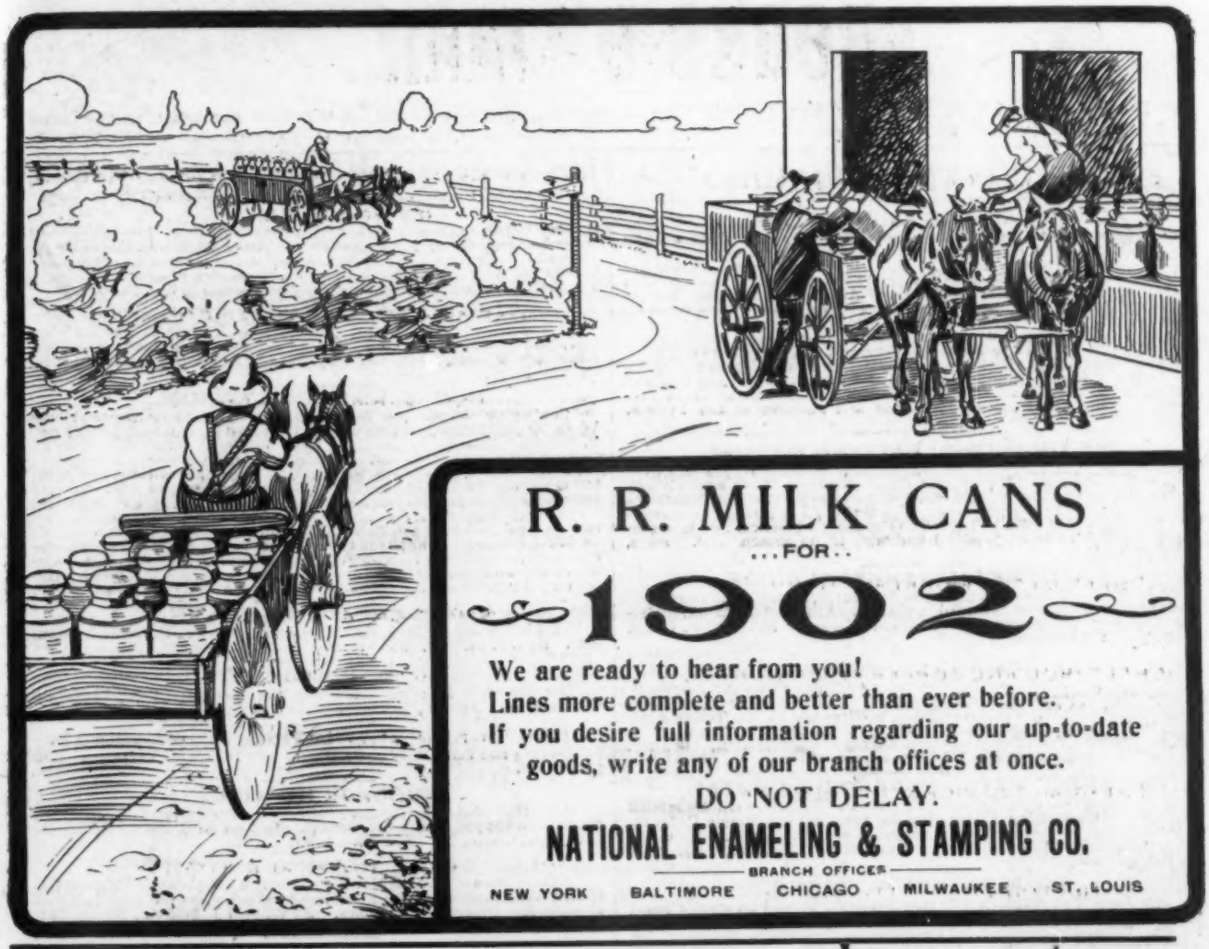

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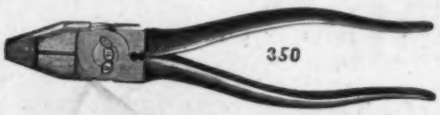

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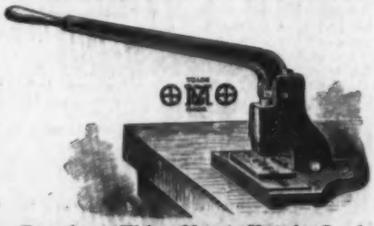

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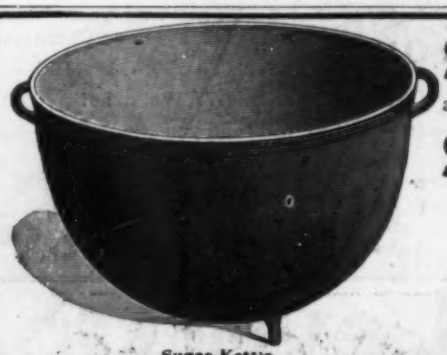

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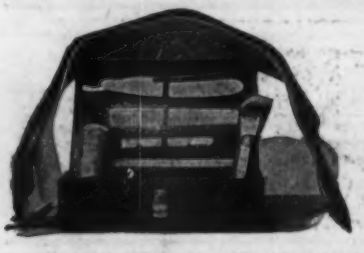

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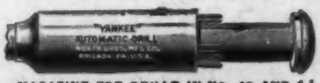

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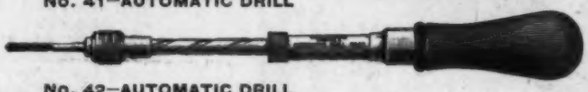

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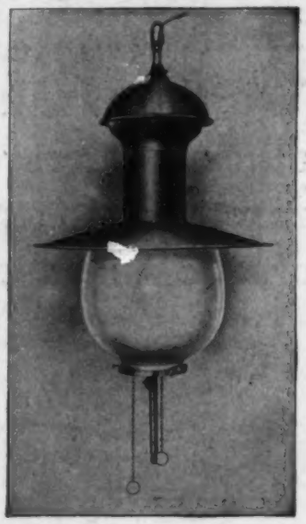

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As many lights as may be desired can be placed on one system.

The outfit meets in every way the requirements of the National Board of Fire Underwriters and Insurance Companies will issue permits for its use without charging extra premium.

We Give an Absolute Guarantee for One Year.

SPECIAL 30 DAY OFFER.

We wish to introduce these lamps into every town in the United States, therefore, for the next 30 days we will prepay the freight on a sample outfit to any point within 1,000 miles from Chicago. In accepting this offer you are risking nothing, for if the outfit is not entirely satisfactory to you it can be returned at any time, within 30 days from date of shipment.

Write for Catalogue and Complete Price List.

Acorn Brass Works;

WE PAY THE FREIGHT. Dept. H, 18-23 So. Jefferson St., CHICAGO, ILL.

The Imperial Lighting System

PATENTS PENDING.

Economical, brilliant, durable, reliable and simple to operate. A light equal to an electric arc at a very low cost.

The Imperial Lighting System is far superior to the Electric Arc, being softer, whiter and absolutely steady. From a tank the gasoline is conveyed throughout an entire building through a flexible copper tube that can be put through crevices, around corners and concealed the same as electric wires, and as many lights as may be desired can be supplied from the same tank. The Imperial System burns common stove gasoline, gives a 1,200 candle power light, and one gallon of gasoline burns 16 hours.

All lamps are fully guaranteed, and are trimmed complete with full instruction as to installing and operating the system.

We also manufacture a complete line of Gravity and Air Pressure Lamps. Write for illustrated catalogue.

THE IMPERIAL GAS LAMP CO., Sole Manufacturers,
132-134 E. LAKE ST., CHICAGO, ILL., U. S. A.

THE Peerless Flue Stopper

Steel wire springs instead of sheet iron stays.

Stays where you put it, and is absolutely soot and smoke proof.

Made either plain or decorated.

Send for miniature sample and prices.

Welling Manufacturing Co.,
Columbus, O.

We may live without poetry, music and art;
We may live without conscience, and live without heart;
We may live without friends, we may live without fads;
But business today cannot live without ads.—American Advertiser.

Just a Little Higher

in price, but so much

HIGHER IN QUALITY

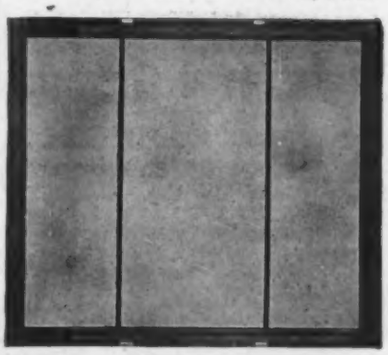
that the great majority of dealers prefer to sell

Caldwell Sash Balances

They can recommend them with clear conscience. Write for catalog.

Caldwell Mfg. Co.
2 Jones St., Rochester, N. Y.

If you wish to know why the sales of the "Flyer Window Screen" increased 6,000 dozen last season, write



The A. J. Phillips Co.
FENTON, MICH.

Harlev Burglar Proof Ventilating Sash Lock Co.
92 La Salle St., CHICAGO.

This Lock is always on guard.

You can't forget to lock it.
It locks itself.
Windows open for ventilation are still locked securely.
The Burglar's "Jimmy" can't force this Lock.
Better than a Policeman, it is there all the time.

It never sleeps. But you can.

Send for Catalogue.

Geo. W. Brown, Jr., Hillsboro, Ill., writes: "You may kindly discontinue our WANTED TINNER adv. that you have so kindly carried for us the past three issues. I have received replies from Vermont to Dakota, and think that we have secured a good man."

We Are Not In The Trust

We have no connection with any other "Rogers" Company, and guarantee our silver ware to strip as much silver as any "Rogers Brand" on the market.

Puritan Oyster Fork.

Send For Our New Catalogue.

Simeon L. and George H. Rogers Company,

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Factories: Hartford and Wallingford, Conn.

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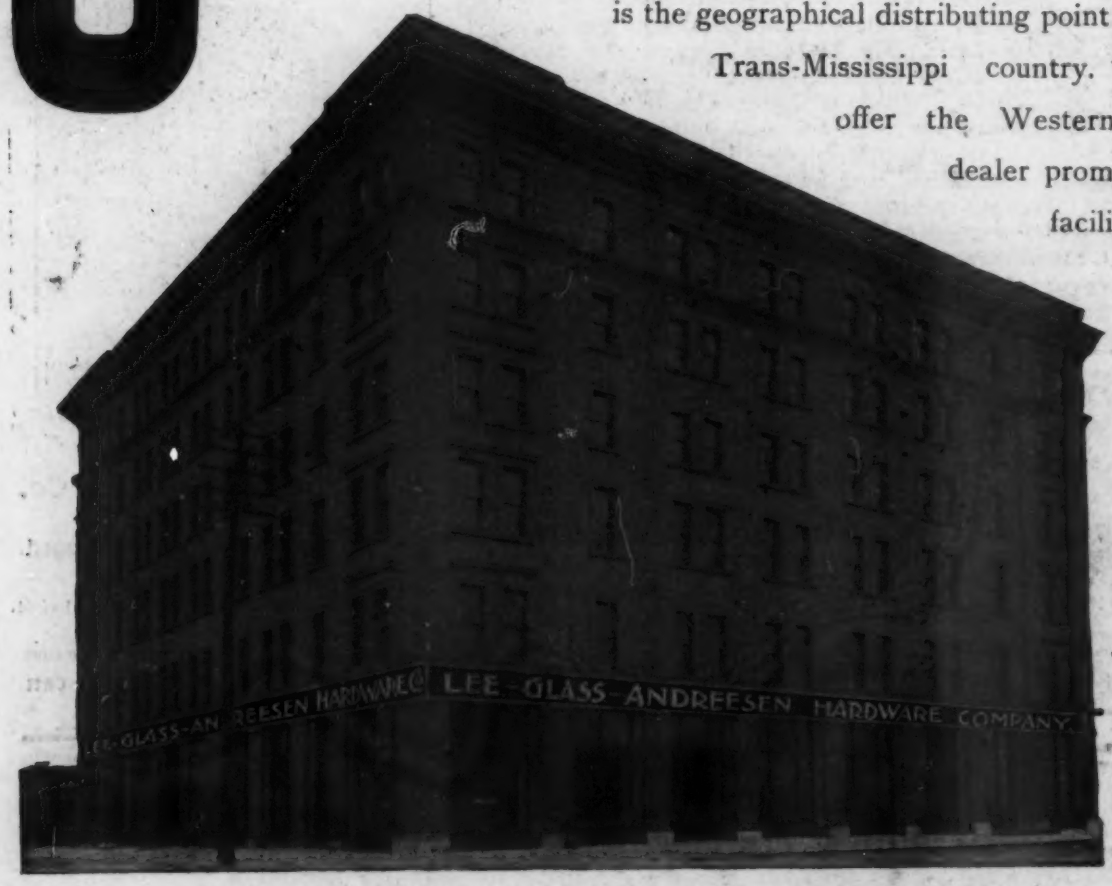
is the geographical distributing point of the great Trans-Mississippi country. We can offer the Western hardware dealer prompt shipping facilities that are absolutely beyond the reach of our competitors.

Our prices are right.

Our goods are made to meet Western requirements.



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Tin or Brass Scoop.

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YOUNG AMERICA SCALE.

BEST IN THE WORLD.

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AMERICAN CUTLERY CO., CHICAGO, ILL.

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Shears, Presses and Dies, Punches, Rolls.

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Just the thing for mending broken harness, straps, belts, etc. Dealers can sell them to every farmer, liveryman, mechanic, engineer, driver and harness maker. They can be carried in the pocket. Weight is only 5 ounces. They will clinch any size of tubular or bifurcated rivet and make a perfect job.

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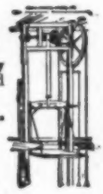

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Will lay out patterns for any size and angle of elbows in three minutes' time. Can also be used as Straight-edge Rule, Circumference Rule and Trammell. Should be in every Tinshop. Will save its cost in a few weeks. Thousands are in use and every one giving excellent satisfaction. Price, complete in a nice wooden box with Chart $4.00 net cash. (Mention THE AMERICAN ARTISAN.)

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Made from very thick metal, without Stay Bolts, Joint packed in such a manner as to never need repacking. A little higher-priced than some, but they are safe and tight.

D. R. SPERRY & CO.,
HOLLOW-WARE FOUNDERS,
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McClure's Genuine Charcoal Iron Redipped Roofing Tin.

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Do you know that the demand for RELIABLE FIRE ARMS has been larger this year than ever before?

Do you know that our ARMS are the most POPULAR line made?

Do you keep them?

All Leading Jobbers Carry our ARMS. Send for Catalog.

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14x20 - 20x28 90-95-100 lbs. IC-IXL-IX

GOLDEN STAR COLD ROLLED STEEL SHEETS

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Are.... Trade Winners!

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